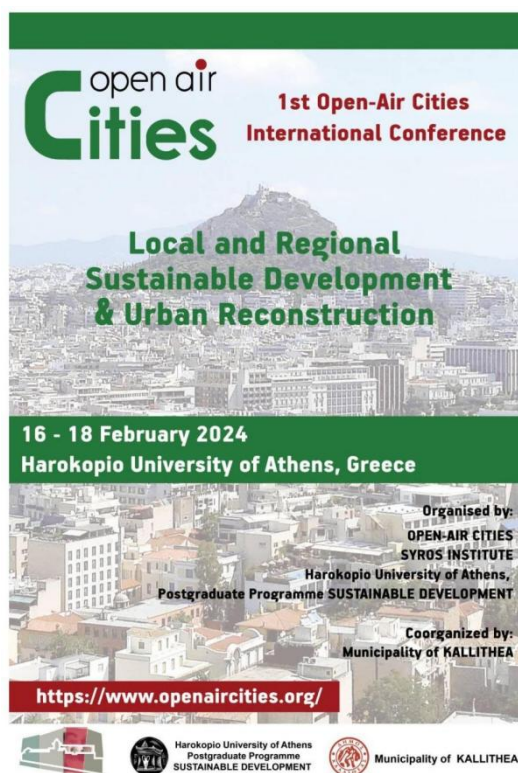


1st OPEN-AIR CITIES INTERNATIONAL CONFERENCE “LOCAL AND REGIONAL SUSTAINABLE DEVELOPMENT AND URBAN RECONSTRUCTION”

Book of Abstracts



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BOOK OF ABSTRACTS

1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

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: the Municipality of KALLITHEA.

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.

The papers that will be presented at the conference have the possibility to be published in the international journal *Sustainable Development, Culture, Traditions Journal* (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: Joseph Stefanou, Moraitis Konstantinos, Slobodan Veleviski, Ilaria Mariotti, Psycharis Yannis, Constantina Kottaridi, Alcestis Rodi, Aspa Gospodini and Luca Salvati.

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 1st OPEN-AIR CITIES International Conference an enjoyable and fulfilling experience.



Chair of the Organizing & Scientific Committees

Roido Mitoula

Professor, “Local and Regional Development - Urban Reconstruction”

Department of Economics and Sustainable Development
School of Environment, Geography and Applied Economics
Harokopio University of Athens
Member of Syros Institute

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1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024



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CONCISE CONFERENCE PROGRAMME

Day 1 - Friday 16/02/2024

- 10:30-11:00 Registration
- 11:00-11:30 OPENING CEREMONY
- 11.30-13.30 Keynote Speeches
- 13.30-14.30 Conference Lunch - Finger Food
- 14.30-17.30 Keynote Speeches
- 17.30-18.00 Coffee Break
- 18.00-20.00 **Session 1:**“The Necessity for Cultural and Political Sustainability: Critical Approaches to Real or Virtual Formations of Landscape and the City”, Organised and chaired by *Prof Konstantinos Moraitis*
- 18.00-20.00 **Session 2:**“Coworking and hybrid spaces enhancing rural areas's sustainable development: evidence from the Cost Action CA18214”, Organised and chaired by *Ilaria Mariotti, Carles Mendez-Ortega and Roido Mitoula*
- 18.00-20.00 **Session 3:**“Sustainable Infrastructures and Constructions”
Chaired by *Prof Dimitris Polychronopoulos*
- 18.00-19.00 **Session 4:**“Culture and Sustainable Heritage”
Chaired by *Assoc Prof Eleni Sardianou*
- 19:00-20:00 **Session 5:**“Soundscape and Human Movement in Urban Environment”,
Chaired by *Asst Prof Ioannis Kostakis*
- 18:00-20:00 **Session 6:**“Urban and Regional Sustainable Environment”
Chaired by *Prof Antonis Zorpas*
- 18:00-20:00 **Session 7:** “Education, Employment and Entrepreneurship”
Chaired by *Prof Eleni Theodoropoulou*

Day 2-Saturday 17/02/2024

- 09:00-10:30 **Session 8:**“Contribution of Forest and Natural Environment to climate actions for Sustainable development”, Organised and chaired by *Professor Kalliopi Radoglou*
Part 1. Mitigation to climate changes
- 10.30-11.00 Coffee Break
- 11:00-11:45 **Session 8:**“Contribution of Forest and Natural Environment to climate actions for Sustainable development”, Organised and chaired by *Professor Kalliopi Radoglou*
Part 1. Mitigation to climate changes
- 11:45-13:30 **Session 9:** “Contribution of Forest and Natural Environment to climate actions for Sustainable development”, Organised and chaired by *Professor Kalliopi Radoglou*
Part 2 Adaptation to climate changes
- 13.30-14.30 Conference Lunch - Finger Food
- 09:00-10:30 **Session 10:**“Spatial Resilience. Conceptual approaches, Policies, Implementations”
Organised and chaired by *Professor Konstantinos Lalenis*
- 10.30-11.00 Coffee Break
- 11:00-12:15 **Session 10:** “Spatial Resilience. Conceptual approaches, Policies, Implementations”
Organised and chaired by *Professor Konstantinos Lalenis*

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- 12:15-13:30 **Session 11:**“Circular Economy”
Chaired by *Asst Prof Christina Chroni*
- 13.30-14.30 **Conference Lunch - Finger Food**
- 09:00-10:30 **Session 12:** “Public Spaces and Urban Mobility”
Chaired by *Prof Alcestis P. Rodi*
- 10.30-11.00 **Coffee Break**
- 11:00-13:30 **Session 13:**“Digital Technologies and Innovation in Urban Development and Sustainability”Chaired by *Asst Prof Olga-Eleni Astara and Dr Ioannis Vardopoulos*
- 13.30-14.30 **Conference Lunch - Finger Food**
- 09:00-10:30 **Session 14:**“Landscape Protection and Urban Renewal”
Chaired by *Dr Pavlos Chatzigrigoriou*
- 10.30-11.00 **Coffee Break**
- 11:00-13:30 **Session 15:**“Sustainable Cities”
Chaired by *Prof Minas Angelidis*
- 13.30-14.30 **Conference Lunch - Finger Food**
- 14:30-16:00 **Session 16:**“Cultural Resources and Sustainable Development”Organised and chaired by *Assoc Prof Maria Kouri*
- 14:30-16:00 **Session 17:** “Immigrant-Minority Groups and Crisis Management Policies”, Organised and chaired by *Lecturer Maria Vlachadi*
- 14:30-16:15 **Session 18:** “Cultural Routes and Sustainable Development”,
Organised and chaired by *Assoc Prof Maria Manola and Dr Leonidas Argyros*
- 14:30-16:00 **Session 19:**“Maritime Spatial Planning, Insular Policies and Sustainable Development”, Organised and chaired by *Prof Stella-Sophia Kyvelou-Chiotini*
- 14:30-16:15 **Session 20:** “Climate Change and Sustainable Energy Issues”
Chaired by *Prof Andrea Colantoni*
- Day 3-Sanday 18/02/2024**
- 09:00-10:30 **Session 21:** “Alternative Tourism - Sustainable Tourism”
Chaired by *Prof Aspa Gospodini*
- 10.30-11.00 **Coffee Break**
- 11:00-12:15 **Session 22:**“Historic urban conservation approaches”
Organised and chaired by *Assoc Prof Despina Dimelli*
- 09:00-10:30 **Session 23:**“Tourism and Sustainable Development”
Chaired by *Prof Luca Salvati*
- 10.30-11.00 **Coffee Break**
- 11:00-13:00 **Session 24:** “Society and Sustainable Development”
Chaired by *Assoc Prof Vasiliki Delitheou*
- 09:00-10:30 **Session 25:**“Cities Physiognomy”
Organised and chaired by *Joseph Stefanou and Roido Mitoula*
- 10.30-11.00 **Coffee Break**
- 11:00-12:30 **Session 26:** “Coastal Cities Physiognomy and sustainability”
Organised and chaired by *Joseph Stefanou and Agisilaos Economou*

Closing of the Conference

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1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

KEYNOTE SPEAKERS



Joseph Stefanou

Em. Professor, National Technical University of Athens

“Global Goal 11 for Sustainable Urban Development. Theoretical approaches”



Moraitis Konstantinos

Professor, National Technical University of Athens

“Cultural ecology and political sustainability: promoting the identity of place in urban and regional landscape context”



Ilaria Mariotti

Associate Professor, Politecnico di Milano

“Coworking and hybrid spaces enhancing local and regional sustainable development”

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Psycharis Yannis

Professor, Panteion University

“Income inequality in metropolitan areas: evidence from Athens”



Slobodan Veleviski

Professor, Faculty of Architecture, Skopje, N. Macedonia

“Sustainable urban design for a small city development: The project Veles 2.0”



Anastasia-Aspasia Gospodini

Professor, University of Thessaly

“Creation of social networks for the demarcation and support of spatial units of cultural heritage. The case of the Pagasitic Gulf”

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Salvati Luca

Professor, Sapienza University of Rome

“Economic Growth, Urbanization, Demographic Dynamics and the implications for Land Resource. Management in the Mediterranean region.”



Constantina Kottaridi

Professor, University of Piraeus

“Circular Economy as a pillar for regional development”



Alcestis Rodi

Associate Professor, University of Patras

“Origin and Future of the X-Minute City”

BOOK OF ABSTRACTS

1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

CONFERENCE SCHEDULE

Day 1 - Friday 16/02/2024

10:00-11:00 **Registration** (Harokopio University) (main building)

11:00-11:30 **OPENING CEREMONY**
(Amphitheater: Georgios Karabatzos)(main building)

Welcome introduction by Prof. Roido Mitoula, Chair of the Organising & Scientific Committee

Prof Maria Nikolaidi, Rector of Harokopio University of Athens
Efthimios Bakogiannis, Secretary General of Spatial planning & Urban Environment, Ministry of Environment and Energy

Efstathios Stathopoulos, Secretary General for Forest, Ministry of Environment and Energy

Konstantinos Askounis, Mayor of the Municipality of Kallithea, Athens - Greece

Dr Pavlos Hatzigrigoriou, Head of Syros Institute

Assoc Prof Vassiliki Costarelli, Head of the Department of Economics & Sustainable Development

Prof Konstantinos Abeliotis, Head of Postgraduate Program “Sustainable Development”, Harokopio University of Athens Vice-Rector

Keynote Speeches

chaired by Prof Roido Mitoula & Prof Konstantinos Abeliotis
(Amphitheater: Georgios Karabatzos)(main building)

11:30-12:00 T02188 GLOBAL GOAL 11 FOR SUSTAINABLE CITY DEVELOPMENT
Joseph Stefanou, *Em.Professor, National Technical University of Athens*
Roido Mitoula, *Professor, Harokopio University of Athens*

12:00-12:30 T02033 CULTURAL ECOLOGY AND POLITICAL SUSTAINABILITY: PROMOTING THE IDENTITY OF PLACE IN URBAN AND REGIONAL LANDSCAPE CONTEXT
Moraitis Konstantinos, *Professor, National Technical University of Athens*

12:30-13:00 T02028 SUSTAINABLE URBAN DESIGN FOR A SMALL CITY DEVELOPMENT: THE PROJECT VELES 2.0
Slobodan Velevski, *Professor, University of Skopje*

13:00-13:30 T02035 COWORKING AND HYBRID SPACES ENHANCING LOCAL AND REGIONAL SUSTAINABLE DEVELOPMENT
Ilaria Mariotti, *Associate Professor, Politecnico di Milano*

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13.30-14.30	Conference Lunch - Finger Food	
Keynote Speeches		
chaired by Assoc Prof Georgios Malindretos (Amphitheater: Georgios Karabatzos)(main building)		
14:30-15:00	T02036	SOCIO-ECONOMIC INEQUALITIES AND FATALITY RATES FROM COVID-19: EVIDENCE FROM THE MUNICIPALITIES ACROSS ATHENS METROPOLITAN AREA Psycharis Yannis , Professor, Panteion University
15:00-15:30	T02106	CIRCULAR ECONOMY AS A PILLAR TO REGIONAL DEVELOPMENT Constantina Kottaridi , Professor, University of Piraeus
15:30-16:00	T02192	ORIGIN AND FUTURE OF THE X-MINUTE CITY Alcestis Rodi , Professor, University of Patras
16:00-16:30	T02179	CREATION OF SOCIAL NETWORKS FOR THE IDENTIFICATION AND SUPPORT OF SPATIAL UNITS OF CULTURAL HERITAGE. THE CASE OF THE PAGASETIC GULF Aspa Gospodini , Professor, University of Thessaly
16:30-17:00	T02034	ECONOMIC GROWTH, URBANIZATION, DEMOGRAPHIC DYNAMICS AND THE IMPLICATIONS FOR LAND RESOURCE MANAGEMENT IN THE MEDITERANIAN REGION Luca Salvati , Professor, Sapienza University of Rome
17:00-17:30	Discussion	
17.30-18.00	Coffee Break	

1

Pre-organised Special Session: “The Necessity for Cultural and Political Sustainability: Critical Approaches to Real or Virtual Formations of Landscape and the City”

Organised and chaired by Prof Konstantinos Moraitis
(Amphitheater: Georgios Karabatzos)(main building)

18:00-18:15	T02095	ECOTOPIA OF PLAY: “ECOSOPHIC” GAME-DESIGN TOWARDS REGENERATIVE CULTURES Stavros Mouzakis
18:15-18:30	T02168	AN INVESTIGATION OF THE POTENTIAL OF PARTICIPATORY LANDSCAPE ASSESSMENT THROUGH CROWDSOURCING WITHIN UNIVERSITY EDUCATION Nikos Mamassis, Romanos Ioannidis, Margarita Zakyntinou-Xanthi, Konstantinos Moraitis

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- 18:30-18:45 T02125 PLACES OF VIOLENCE - LANDSCAPES OF MEMORY
Fili Iliopoulou
- 18:45-19:00 T02103 PLACE BRANDING AND THE ANCIENT GREEK IMAGINARY:
THE CASE OF LESBOS ISLAND AS AN EXAMPLE FOR THE
CREATION OF GREEK NATIONAL NETWORK OF
ASSOCIATIVE CULTURAL LANDSCAPES
Rigas Katachanas
- 19:00-19:15 T02139 REVOLUTIONIZING URBAN DESIGN AND PLANNING:
EMBRACING ADVANCED DIGITAL TOOLS FOR A
SUSTAINABLE AND INCLUSIVE FUTURE
Maria Velaora
- 19:15-19:30 T02069 RE-EXAMINING AND REVISITING THE LANDSCAPE IN
TERMS OF INTANGIBLE-MATERIAL CULTURE AND
SUSTAINABILITY: A CASE STUDY FOR THE AREA-REGION
OF ELASSONA IN THESSALY
Maria Markatou
- 19:30-20:00 Discussion

2

Pre-organised Special Session: “Coworking and hybrid spaces enhancing rural areas's sustainable development: evidence from the Cost Action CA18214”
Organised and chaired by [Ilaria Mariotti](#), [Carles Mendez-Ortega](#) and [Roido Mitoula](#)
[\(Ceremony Hall\) \(New Library Building\)](#)

- 18:00-18:15 T02101 COLLABORATIVE SPACES PROMOTING YOUTH
EMPLOYMENT INITIATIVES IN PERIPHERAL AREAS
Dimitris Manoukas, IlariaMariotti
- 18:15-18:30 T02046 THE RISE OF CO-WORKING IN RURAL GREECE:
OPPORTUNITIES AND CHALLENGES FOR SUSTAINABLE
DEVELOPMENT
Angelos Papavasileiou, Roido Mitoula
- 18:30-18:45 T02032 USING ARTIFICIAL INTELLIGENCE AS A PROGRAM FOR
ANTICIPATING SHRINKING CITIES SCENARIOS
Ernest Shtepani, Kejsi Kuzari
- 18:45-19:00 T02114 UNLOCKING THE FUTURE OF COWORKING: AN ANALYSIS
OF RURAL KNOWLEDGE HUBS
Carles Méndez-Ortega, Grzegorz Micek, Thomas Vogl
- 19:00-19:15 T02112 TOWARDS SUSTAINABILITY OF RURAL COWORKING
SPACES. A SYSTEMATIC LITERATURE REVIEW.
Mar Alsina-Folch, Inés Gutierrez-Cueli, Lluís Garay-Tamajón
- 19:15-19:30 T02156 MAKERSPACES AND FABLABS IN ISTANBUL: SUPPORTING
LOCAL ENTREPRENEURSHIP AND INNOVATION
Meltem Parlak Mavitan

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19:30-19:45 T02082 RESILIENT HUBS: UNVEILING THE DYNAMICS OF UKRAINIAN COWORKING SPACES AMIDST WAR AND BLACKOUTS
Viktoriiia Zhurbas-Lytvyn

19:45-20:00 T02190 COLLABORATIVE WORKSPACES IN LARGE CITIES AND SMALLER TOWNS. THE CORAL SURVEY
Lorenzo Marmo, Vasilis Avdikos

3

ThematicSession: “Sustainable Infrastructures and Constructions”

Chaired by Prof Dimitris Polychronopoulos
(Room A1) (main building)

18:00-18:15 T02030 SUSTAINABLE SMALL-SCALE HOUSING CONSTRUCTION USING 3D PRINTING: EVALUATION OF BUILDING PROTOTYPES
Anna Yunitsyna, Andjol Bici

18:15-18:30 T02031 CULTURE AND RESILIENCE: AN INNOVATIVE APPROACH TO EVALUATE THE CULTURAL RESILIENCE OF THE CITIES THROUGH INDICATORS
Eleni Linaki

18:30-18:45 T02140 BOOSTING CONFIDENCE IN CIRCULAR CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT: A DPSIR FRAMEWORK ANALYSIS
Anna Michou, Ilias Dimitriadis, Olga Lampri, Aggelos Tsaligopoulos

18:45-19:00 T02152 INNOVATIVE MATERIALS AND METHODS FOR THE DEVELOPMENT OF DECARBONIZED SUSTAINABLE CITIES
Dimitra Papadaki, Chrysanthi Efthymiou, Margarita-Niki Assimakopoulos, Lorenzo Pattelli, Jochen Manara, Antonio Panvini, Juliana Jaramillo-Fernandez, Ares Lladós, Tito Gionfini, Marco Ortisi, Michal Voldán, Štěpán Kapouněk, Lenka Kňazovická, David Tichý

19:00-19:15 T02180 THE DETERMINANTS OF GREEN BUILDING: AN EMPIRICAL ANALYSIS AMONG EUROPEAN COUNTRIES
Paraskevi Angeletopoulou, Eleni Sardianou, Ioannis Kostakis

19:15-19:30 T02118 DRY STONE WALLING, A TOOL FOR SUSTAINABLE DEVELOPMENT IN URBAN AND RURAL AREAS
Evangelia Stathopoulou, Eleni Theodoropoulou, Antony Rezitis, George Vlachos

19:30-20:00 Discussion

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4

Thematic Session: “Culture and Sustainable Heritage”
Chaired by Assoc Prof Eleni Sardianou
(Room A2) (main building)

- 18:00-18:15 T02170 GREEN INFRASTRUCTURES FOR ENVIRONMENTAL PROTECTION AND THE SPREAD OF THE CULTURE OF SUSTAINABILITY
Andrea Colantoni, Leonardo Bianchini, Giorgia Di Domenico, Paolo Pesarini, Valerio Di Stefano, Bogdana Nosova
- 18:15-18:30 T02068 IMPLEMENTING THE PROTECTION OF CULTURAL ENVIRONMENT IN THE SCOPE OF APPLICATION OF THE RIGHT TO PERSONALITY
Dimitrios Devetzis
- 18:30-18:45 T02096 VALUE ASSESSMENT THROUGH PARTICIPATORY METHODS FOR A SUSTAINABLE HERITAGE: THE CASE OF AYAZINI, AFYONKARAHISAR, TÜRKIYE
Evrin Koç
- 18.45-19.00 Discussion

5

Thematic Session: “Soundscape and Human Movement in Urban Environment”
Chaired by Asst Prof Ioannis Kostakis
(Room A2) (main building)

- 19:00-19:15 T02141 ECHOES OF SUSTAINABILITY: SOUNDSCAPE AND SUSTAINABILITY ASSESSMENT IN A COLLEGE CAMPUS
Tatiana Batiridou, Angelos Gatsos, GeorgieKamaratos, Christina Katsilidou, Penelope Kazia, PetrosKonstantinidis, Christina Marthaki, Andreas Ntouni, Erin Platz, Sofia Lalou, AggelosTsaligopoulos
- 19:15-19:30 T02145 SOUND COMPLEXITY AS AN ALTERNATIVE ASSESSMENT ENDPOINT OF ENVIRONMENTAL NOISE
Aggelos Tsaligopoulos, Stella-Sophia Kyvelou-Chiotini, Aimilia Karapostoli, Nicos Bobolos, Theodora Tsintzou, Demetris F. Lekkas, Yiannis G. Matsinos
- 19:30-19:45 T02150 SOUNDSCAPE AS A DESIGN TOOL FOR OPEN URBAN SPACES: AN ANALYSIS OF THE WATERFRONT AREA SURROUNDING THESSALONIKI CONCERT HALL
Maria Kaplanidou, Antanina Valoshyna, Garyfallia Katsavounidou
- 19:45-20:00 T02065 KINESTHETIC SPATIOGRAPHY. INTERPRETING HUMAN MOVEMENT IN URBANENVIRONMENTS AND THE CONTRIBUTION OF DANCE.
Lydia Panagoulia

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6

Thematic Session: “Urban and Regional Sustainable Environment”

Chaired by Prof Antonis Zorpa and Lecturer Irene Voukkali s
(Room A5) (main building)

- 18:00-18:15 T02078 VALUES AND INTERESTS IN THE FOREST-DEPENDENT COMMUNITIES IN UKRAINIAN CARPATHIAN MOUNTAINS: BETWEEN SURVIVAL AND SUSTAINABLE GROWTH
Nataliia Pohorila
- 18:15-18:30 T02135 “WELLCOME TO AIDIPSOS”: A CRITICAL MAPPING WORKSHOP THAT EXPLORES THE FEASIBILITY OF THE CITY’S THERMAL SPRINGS NETWORK SUSTAINABLE DEVELOPMENT
Efrossyni Tsakiri, Socrates Yiannoudes, Efrossyni Mouzakitou, Angelos Psilopoulos
- 18:30-18:45 T02166 REINVENTING LOUTRA AIDIPSOS: STRATEGIES AND CONCEPTS FOR A HOLISTIC SUSTAINABLE DEVELOPMENT OF THERMAL SETTLEMENTS
Efrossyni Tsakiri, Maria Vrasida
- 18:45-19:00 T02109 NICE’S GREEN OASIS: ANALYZING SUSTAINABLE URBAN TRANSFORMATIONS THROUGH AN EXAMINATION OF THE PROMENADE DU PAILLON PROJECT
Alexia Stefanovich
- 19:00-19:15 T02167 A PARADIGM SHIFT IN REAL ESTATE DYNAMICS: UNRAVELING THE BLUEPRINT FOR URBAN WELL-BEING
Ioannis Vardopoulos, Agapios Demosthenous, Roido Mitoula
- 19:15-19:30 T02172 URBAN METABOLISM CONSIDERING THE “15-MINUTE CITY” CONCEPT
Irene Voukkali, Ioannis Vardopoulos, Iliana Papamichael, Antonis Zorpas
- 19:30-20:00 Discussion

7

Thematic Session: “Education, Employment and Entrepreneurship”

Chaired by Prof Eleni Theodoropoulou
(Room A6) (main building)

- 18:00-18:15 T02122 SUSTAINABLE DEVELOPMENT AND LABOUR MARKET IN THE REGION OF CRETE: A MIXED METHODS APPROACH FOR UNDERSTANDING THE FACTORS ASSOCIATED WITH EMPLOYMENT AND INCOME PRECARITY
Emmanouil Vergis, Sofia Triliva, Margarita Genius, Michael Taroudakis, Nikos Papadakis

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1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

- 18:30-18:45 T02142 A COMPREHENSIVE LITERATURE REVIEW OF MULTICRITERIA DECISION-MAKING (MCDM) TECHNIQUES, WITH A FOCUS ON THE ANALYTIC HIERARCHY PROCESS (AHP)
Katerina Kabassi, Aristotelis Martinis, Maria Kaloutsa
- 18:45-19:00 T02165 EXPLORING PROFESIONALISATION ASPECTS OF INNOVATIVE PARTICIPATORY LOCAL DEVELOPMENT THROUGH QUALITATIVE RESEARCH
Dionisia Koutsis, Thanos Andritsos
- 19:00-19:15 T02110 THE PROMOTION OF SUSTAINABILITY THROUGH THE INCLUSION AND TRAINING PROCESS
Maria Poli, Konstantinos N. Malagas
- 19:15-19:30 T02041 PROMOTING THE 17 GLOBAL SUSTAINABLE DEVELOPMENT GOALS THROUGH PRIMARY EDUCATION
Vasiliki Kl. Papadopoulou
- 19:30-19:45 T02154 EVALUATION OF THE STATE OF KNOWLEDGE AND ATTITUDES OF SECONDARY SCHOOL TEACHERS IN THE ENVIRONMENTAL EDUCATION (EE) AND EDUCATION FOR SUSTAINABLE DEVELOPMENT (ESD) PROGRAMS
Efstathios Loupas, Aristotelis Martinis, Aikaterini Kambasi
- 19.45-20.00 Discussion

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Day 2-Saturday 17/02/2024

8		Pre-organised Special Session: “Contribution of Forest and Natural Environment to climate actions for Sustainable development” Organised and chaired by Prof Kalliopi Radoglou Part 1. Mitigation to climate changes (Amphitheater: Georgios Karabatzos) (main building)
09:00-09:15	T02081	ABOVE AND BELOW GROUND BIOMASS ESTIMATION OF EVERGREEN FORMATIONS Gavriil Spyroglou, Giorgos Xanthopoulos, Kalliopi Radoglou
09:15-09:30	T02187	ALLOMETRY, BIOMASS AND PRODUCTIVITY OF DECIDUOUS OAK FORESTS IN XANTHI (NORTHERN GREECE) Kyriaki Kitikidou, Elias Milios, Kalliopi Radoglou
09:30-09:45	T02083	CARBON SEQUESTRATION IN A NATURAL COASTAL ALEPPO PINE FOREST Giorgos Xanthopoulos, Gavriil Spyroglou, Kalliopi Radoglou, Mariangela MN Fotelli
09:45-10:00	T02086	LONG-TERM MONITORING OF CARBON FLUXES AND PHENOLOGICAL SHIFTS IN A POST-MINING FOREST PLANTATION Nikos Markos, Kalliopi Radoglou
10:00-10:15	T02131	SIMULATING THE CARBON POOLS OF MEDITERRANEAN PINE FORESTS UNDER DIFFERENT CLIMATE CHANGE SCENARIOS Nikolaos M Fyllas, Christodoulos I Sazeides
10:15-10:30	T02066	ROOT SYMBOLIC RELATIONSHIPS ENHANCE C STORAGE IN ROBINIA PSEUDOACACIA RESTORATION PLANTATIONS Mariangela Fotelli, Emmanouil Fletmetakis, Rodica Efroze, Skliros Dimitrios, Kalliopi Radoglou
10.30-11.00		Coffee Break
11:00-11:15	T02186	EFFECTS OF CLIMATE CHANGE ON THE ORGANIC CARBON IN FOREST SOILS Panagiotis Michopoulos
11:15-11:30	T02077	SOIL RESPIRATION IN MEDITERRANEAN OAK-DOMINATED ECOSYSTEMS IN GREECE Stavroula Zacharoudi, Gavril Spyroglou, Mariangela Fotelli, Kalliopi Radoglou
11:30-11:45	T02089	MODELLING SOIL ORGANIC CARBON STOCKS IN FOREST SOILS Nikolaos Lolos, Maria Batsalia, Dimitris Triantakonstantis

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Pre-organised Special Session: “Contribution of Forest and Natural Environment to climate actions for Sustainable development”.

Organised and chaired by Prof Kalliopi Radoglou

Part 2 Adaptation to climate changes

(Amphitheater: Georgios Karabatzos) (main building)

11:45-12:00	T02191	FOREST MANAGEMENT STRATEGIES FOR ADAPTATION TO CLIMATE CHANGE Nikos Nanos
12:00-12:15	T02087	ENHANCING THE RESILIENCE OF THE SCHINIAS-MARATHON NATIONAL PARK THROUGH THE REINFORCEMENT OF PINUS PINEA Evangelia Korakaki, Nikolaos Proutsos, Evangelia Avramidou, Alexandra Solomou, Georgios Mantakas, Christina Nomikou, Georgios Karetzos
12:15-12:30	T02059	DEVELOPMENT OF MEDITERRANEAN AGROFORESTRY LANDSCAPES RESILIENT TO CLIMATIC CHANGES: THE RESALLIANCE PROJECT Evangelia V. Avramidou, Miltiadis Athanasiou, Sofia Gounari, Evangelia Korakaki, Panagiotis Koulelis, Eirini Pittara, Nikolaos Proutsos, Alexandra Solomou, Gavriil Xanthopoulos, Vasileios Gkisakis, Dimitrios Taskos, Dionisis Georgiou, Konstantinos Kaoukis, Georgios Mantakas, Danai Panagiotopoulou, Nikoleta Soulioti
12:30-12:45	T02183	WILDFIRE HAZARDS OF PERI-URBAN FORESTS AND SILVICULTURAL APPROACHES, THE CASE OF PERI-URBAN FOREST OF XANTHI Elias Milios
12:45-13:00	T02060	SECURING SUSTAINABILITY OF FOREST TREES IN RELATION TO GENETIC AND EPIGENETIC POOLS Evangelia V. Avramidou
13:00-13:15	T02094	MEASUREMENT AND COMPARISON OF INHALABLE DUST BETWEEN PERI-URBAN FOREST AND URBAN ENVIRONMENT Vasiliki Dimou, Eleftheria Binopoulou, Chrisovalantis Malesios
13:15-13:30		Discussion
13.30-14.30		Conference Lunch - Finger Food

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10

Pre-organised Special Session: “Spatial Resilience. Conceptual approaches, Policies, Implementations”

Organised and chaired by Prof Konstantinos Lalenis
(Ceremony Hall) (New Library Building)

- 09:00-09:15 T02061 RESILIENCE, REGIONAL RESILIENCE, URBAN RESILIENCE: INTRODUCTION TO THEORY
Konstantinos Lalenis
- 09:15-09:30 T02164 PANARCHY: UNVEILING AN IMPORTANT DIMENSION OF RESILIENCE’S CONCEPTUAL FRAMEWORK
Christos Kotsinis
- 09:30-09:45 T02097 EMBRACING THREATS: THE ART OF RESILIENT RHETORIC IN SPACE POLICY
Monica Themou, Anna Arvanitaki, Maria Markou
- 09:45-10:00 T02080 PUBLIC SPACE AND URBAN RESILIENCE
Foteini Zygouri
- 10:00-10:15 T02056 NECRO-RESILIENCE: CEMETERY RESILIENCE AND ITS ROLE IN URBAN SYSTEMS
Yannis Polymenidis
- 10:15-10:30 T02074 LEVERAGING BLOCKCHAIN FOR SMART CITY RESILIENCE: STRENGTHENING PREVENTION AND CIVIL PROTECTION SYSTEMS
Dimitrios Christodoulou, Dimitrios Kalergis

10.30-11.00

Coffee Break

- 11:00-11:15 T02054 PROXIMITY ORIENTED DEVELOPMENT FOR URBAN RESILIENCE: THE CASE OF 15 MINUTE CITY
Georgia Pozoukidou
- 11:15-11:30 T02051 BUILDING SUSTAINABLE URBAN MOBILITY FOR RESILIENT CITIES: INSIGHTS FROM ATHENS MUNICIPALITY
Despina Dimelli
- 11:30-11:45 T02064 UNVEILING SOLIDARITY URBAN COMMONS: CRITICAL PERSPECTIVES ON RESILIENCE IN REFUGEE ACCOMMODATION IN ATHENS AND THESSALONIKI
Charalampos Tsavdaroglou
- 11:45-12:00 T02123 BATTLING URBAN FLOODS: SPATIAL PLANNING, EDUCATION AND PREVENTION INITIATIVES FOR ENHANCING RESILIENCE
Elena Samourkasidou, Dimitrios Emmanouloudis
- 12:00-12:15 Discussion

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ThematicSession: “Circular Economy”
Chaired by Asst Prof Christina Chroni
(Ceremony Hall) (New Library Building)

- 12:15-12:30 T02055 CIRCULAR ECONOMY IN CONSTRUCTION - A
STAKEHOLDER PERSPECTIVE
Ahmad Wadee, Juan A. Ferriz-Papi
- 12:30-12:45 T02091 EXAMINING CITIZENS’ PERCEPTIONS AND BEHAVIOUR
WITH RESPECT TO CIRCULAR ECONOMY PRACTISES IN
THE CONSTRUCTION SECTOR
Spyridon Karytsas, Theoni I. Oikonomou, Eleni Theodoropoulou,
Constantine Karytsas
- 12:45-13:00 T02108 CONSUMER PERCEPTION OF NEAR-EXPIRY FOODS AND
RETAILERS PRACTICES TOWARDS IMPROVING
SUSTAINABILITY PERFORMANCE
Maria Kanavaki, George Malindretos, Gkalimana Drosis
- 13:00-13:15 T02137 RETROFITTING [INDUSTRIAL] ECOLOGIES
Ana Rafailovska, Marija Mano Velevska, Blagoja Bajkovski,
Goran Mickovski, Slobodan Velevski
- 13:15-13:30 Discussion

13.30-14.30 Conference Lunch - Finger Food

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ThematicSession: “Public Spaces and Urban Mobility”
Chaired by Prof Alcestis P. Rodi
(Room A2) (main building)

- 09:00-09:15 T02079 TRANSFORMING SMALL SCALE PUBLIC SPACES IN THE
POST-PANDEMIC ERA
Maria Grigoriadou, Dimitris Polychronopoulos
- 09:15-09:30 T02124 URBAN CULTURES AND PUBLIC OPEN SPACES: THEIR
INTERPRETATION DURING CORONAVIRUS PERIOD
Maria Grigoriadou, Elena Samourkasidou
- 09:30-09:45 T02153 IMPROVING ACCESSIBILITY, INCLUSIVENESS AND CO-
BENEFITS OF PUBLIC SPACES IN EURO-MEDITERRANEAN
CITIES: A SOFT STRATEGY APPROACH AND THE CASE OF
KALLITHEA (ATTIKI)
Nicos Bobolos, Stella-Sofia Kyvelou-Chiotini, Aggelos Tsaligopoulos
- 09:45-10:00 T02158 SUSTAINABLE MANAGEMENT OF PUBLIC SPACES AND THE
17 UN SDGs. A RESEARCH CASE STUDY ON THE OLD TOWN
OF CORFU, GREECE
Sofia Maria Poulimenou

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- 10:00-10:15 T02133 A LITERATURE REVIEW ON THE INTRODUCTION AND DOMINANCE OF THE AUTOMOBILE IN THE CITY WITH THE AIM OF PREPARIN THE CITY FOR THE FUTURE MOTOR VEHICLE
Petri Ioanna, Alcestis P. Rodi
- 10.:15-10:30 T02162 THE 2030 UNITED NATIONS AGENDA FOR SUSTAINABLE DEVELOPMENT AND THE GOAL 11 FOR SUSTAINABLE URBAN DEVELOPMENT. THE "SMART", THE "OPEN" AND FINALLY THE SUSTAINABLE CITY. THE SUSTAINABLE URBAN MOBILITY PLANS
Konstantinos Chatzifraghios Makrydakis

10.30-11.00 Coffee Break

13

ThematicSession: “Digital Technologies and Innovation in Urban Development and Sustainability”

Chaired by **Asst Prof Olga-Eleni Astara & Dr Ioannis Vardopoulos**
(Room A2) (main building)

- 11:00-11:15 T02025 EVALUATION OF THE LABOUR CITIES LOCATIONS USING GEOGRAPHIC INFORMATION SYSTEMS BASED ON POLULATION AND SPATIAL CRITERIA IN KUWAIT
Nayef Alghais
- 11:15-11:30 T02027 INNOVATIVE REGIONAL DEVELOPMENT THROUGH THE RIS3 SMART SPECIALIZATION STRATEGY
Panagiota G Ahamnou
- 11:30-11:45 T02067 INTERNET OF THINGS (IoT) AND ITS IMPACT ON THE DEVELOPMENT OF ENVIRONMENTALLY SUSTAINABLE CITIES: ASSURING DATA PRIVACY WHILE DEVELOPING ECO-HEALTHY LIVING
Dimitrios Devetzis
- 11:.45-12:00 T02151 FUTURE SMART CITY ENVIRONMENT: INNOVATIVE AIR POLLUTION MONITORING NETWORK USING INFO KIOSK BENCHES
Dimitra Papadaki, Kyriaki-Maria Fameli, Chrysanthi Efthymiou, Aggelos Kladakis, Chrysa Charalampidou, Margarita-Niki Assimakopoulos, Vasiliki Assimakopoulos
- 12:00-12:15 T02171 NAVIGATING THE DIGITAL FRONTIER: SOCIO-ECONOMIC PERSPECTIVES ON THE TRANSFORMATION OF THE TOURISM INDUSTRY IN THE POST-PANDEMIC ERA
Olga-Eleni Astara, Alexandros Garefalakis, Kelly Lykogeorgou
- 12:15-12:30 T02184 CONSTANTINOS DOXIADIS AND ADRIANO OLIVETTI’S URBANISM VIS-A-VIS SUSTAINABLE PLANNING: THE EKISTIC GRID AND THE ROLE OF URBAN SCALE DIGITAL TWINS IN URBAN PLANNING PRACTICES
Marianna Charitonidou
- 12:30-13:30 Discussion

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13.30-14.30 Conference Lunch - Finger Food

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ThematicSession: “Landscape Protection and Urban Renewal”
Chaired by Dr Pavlos Chatzigrigoriou
(Room A6) (main building)

- 09:00-09:15 T02173 PARTICIPATORY CONSERVATION PLANNING: THE CASE OF ELEONAS DISTRICT IN ATHENS
Pavlos Chatzigrigoriou, Vasiliki Nikolakopoulou, Danae Kalliabetsou, Aliko Chamalidou
- 09:15-09:30 T02073 RE-THINKING ISLANDS AS RESILIENCY INCUBATORS
Ivana Katurić, Violeta Peran, Ana Devčić, Ozana Palić
- 09:30-09:45 T02024 ON MILO’ S ISLAND EDGE. DESIGNING WITH THE LANDSCAPE
Riva Lava, Archontoula Vasilara
- 09:45-10:00 T02070 THESSALY: AN HISTORICAL LANDSCAPE IN DECLINE OR THE BEGINNING OF A NEW REGIONAL MODEL
Maria Markatou
- 10:00-10:15 T02157 URBAN REGENERATION AND CULTURAL LANDSCAPE IN GREEK CITIES: LESSONS FROM ELEFSINA
Stamatia Prigkou
- 10:15-10:30 T02159 THE LANDSCAPE IN SPATIAL AND DEVELOPMENTAL PLANNING. CASE STUDY: THE REGION OF EASTERN MACEDONIA - THRACE
Foteini Stefani, Soultana Vezyriannidou

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ThematicSession: “Sustainable Cities”
Chaired by Prof Minas Angelidis
(Room A6) (main building)

- 11:00-11:15 T02111 ADAPTIVE REUSE VS URBAN RENEWAL APPROACH OF ABANDONED INDUSTRIAL LOCATIONS - A CASE STUDY OF SLAVIJA WAREHOUSE LOCATION IN SKOPJE, REPUBLIC OF NORTH MACEDONIA
Mickovski Goran, Rafailovska Ana, Arsovski Ivan
- 11:15-11:30 T02100 A "NEW" NARRATIVE FOR THE "NEOS KOSMOS"
Maria Moira, Dimitrios Makris
- 11:30-11:45 T02149 ACHIEVING SUSTAINABILITY IN URBAN COMMUNITIES THROUGH THE IMPLEMENTATION OF THE CO-DESIGN PROCESS
Charisis Lalopoulos, Iliani Panagiari Malea, Evangelos Panagiaris Maleas

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- 11:45-12:00 T02045 TOWARDS A SUSTAINABLE URBAN FUTURE: THE 15-MINUTE CITY APPROACH IN PARIS, FRANCE
Katerina Christoforaki
- 12:00-12:15 T02048 SUSTAINABLE CITIES AND REGIONS IN EUROPEAN UNION WITH FOCUS IN GREECE AND ATHENS: MAIN RECENT CHANGES, POLICY RECOMMENDATIONS
Minas Angelidis, Eleni Drakouli, Epameinondas Tsigkas
- 12:15-12:30 T02185 WHY ARE CITIES IMPORTANT TO HEALTH? REVISITING THE ROLE OF HEALTHY CITIES IN ENHANCING QUALITY OF LIFE AND HEALTH PROMOTION
Theodoros Fouskas, Vassilis Bokolas
- 12:30-12:45 T02193 THE CONTRIBUTION OF THE PORTS OF MESSINA TO THE DEVELOPMENT OF THE ECONOMY OF PELOPONNIS
Dimitris Christou
- 12:30-13:00 T02194 GREEN BUILDINGS AND SUSTAINABLE DEVELOPMENT
Konstantina Oikonomou
- 13:00-13:30 Discussion

13.30-14.30 Conference Lunch - Finger Food

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Pre-organised Special Session: “Cultural Resources and Sustainable Development”

Organised and chaired by Assoc Prof Maria Kouri
(Amphitheater: Georgios Karabatzos)(main building)

- 14:30-14:45 T02071 OLIVE HERITAGE AND DEVELOPMENT OF OLEOTOURISM IN MESSENIA AS A LEVER OF REGIONAL SUSTAINABLE DEVELOPMENT
Maria Kouri
- 14:45-15:00 T02058 SUSTAINABLE DEVELOPMENT IN URBAN ENVIRONMENTS THROUGH ART EDUCATION
Elissavet Lintzerakou
- 15:00-15:15 T02090 PORTUGUESE OLIVE HERITAGE AND "SARAMAGO'S 100 OLIVE TREES": AN INTER- AND MULTIDISCIPLINARY PROJECT WITHIN THE SCOPE OF HIGHER EDUCATION IN TOURISM
Fernanda Oliveira, Gilberto Moiteiro, Sofia Eurico, Inês Brasão, Daniela Amorim, Francisco Dias
- 15:15-15:30 T02057 INTERGENERATIONAL RESILIENCE AND CULTURAL SUSTAINABILITY: YIELDING MEMORIES IN SOUFLI
Theodora Patrona, Sophia Emmanouilidou
- 15:30-15:45 T02076 PAMISO'S RIVER CULTURAL LANDSCAPE: A SUSTAINABLE APPROACH
Maria Tsoulakou

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15:45-16:00 T02105 VISUALIZING ARCHAEOLOGICAL DATA:THE PYLOS
GEOARCHAEOLOGICAL PROGRAM
Nikolaos Zacharias, Vayia V. Panagiotidis

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Pre-organised Special Session: “Immigrant-Minority Groups and Crisis Management Policies”
Organised and chaired by Lecturer Maria Vlachadi
(Room A1) (main building)

14:30-14:45 T02026 THE ISSUE OF IMMIGRANT-REFUGEE CRISIS AND
MANAGING POLICIES: FIELD RESEARCH
Maria Vlachadi, Zeniou Petros, Georgantas Athanasios,
Anastasopoulos Georgios, Kolios Christoforos, Kotsopoulos Andreas

14:45-15:00 T02029 SOCIAL SUSTAINABILITY, SOCIAL POLICY AND THE STAKE
OF MIGRANTS’ AND REFUGEES’ SOCIAL INCLUSION
Nikos Papadakis, Stelios Tzagkarakis, Maria Drakaki, Georgia Dimari

15:00-15:15 T02075 CONSTITUTIONAL PROTECTION OF HEALTHY
ENVIRONMENT AND SUSTAINABILITY IN THE HUNGARIAN
CONSTITUTIONAL LAW
Júlia Kovács Téglásiné, András Téglási

15:15-15:30 T02098 FROM ISIS TO MAGA: PRO-TRUMP DISINFORMATION
DURING THE TWITTER AFTERMATH OF THE 2017
TERRORIST ATTACKS IN FIVE MEGACITIES
Ioanna Ferra, Dennis Nguyen, Athina Karatzogianni

15:30-15:45 T02119 THE HEALTH CARE NEEDS OF A RURAL POPULATION
DURING THE COVID 19 ERA. EVIDENCE FROM A
MUNICIPALITY IN CRETE, GREECE
Maria Papadakaki, Evangelos Tzoukas, Maria Maniou,
George Markakis, Joannes Chliaoutakis

15:45-16:00 T02189 BURNOUT INCIDENCE DURING PANDEMIC: A CASE STUDY
IN ROMANIAN BUSINESS SECTOR
Delia Ștefenel , Mihai Ilie Balaban

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Pre-organised Special Session: “Cultural Routes and Sustainable Development”
Organised and chaired by Assoc Prof Maria Manola & Dr Leonidas Argyros
(Room A2) (main building)

14:30-14:45 T02116 THE EFFECT OF MUSIC UPON THE RESTAURANT
CUSTOMERS’ PERCEPTION AND CHOICE
Laloumis Athanasios, Manola Maria, Papadogoulas Georgios,
Vlassas Vasileios

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- 14:45-15:00 T02102 TOURIST ATTRACTION THROUGH ODYSSEY AND ITS THEATRICAL PLAY IN MODERN GREECE: THE VIEWS OF CULTURALLY AWARE TOURISTS FROM ATHENS
Constantinos Ikonou, Manola Maria, Olympia Papaioannou, Stivanaki Evanthia, Maria-Nefeli Simota
- 15:00-15:15 T02047 THE CONTRIBUTION OF THE TRAVELLERS’ TEXTS TO THE SUSTAINABLE TOURISM DEVELOPMENT OF CRETE
Tsatalmpasoglou Anna, Manola Maria
- 15:15-15:30 T02043 CROSS-BORDER ENTREPRENEURSHIP WITH A FOCUS ON THE OTTOMAN MONUMENTS OF LESVOS
Foteini Maniou
- 15:30-15:45 T02038 THE SACRED TRIANGLE OF ANCIENT GREECE: AN EXPERIENTIAL EDUCATIONAL APPROACH TO CLASSICAL ARCHITECTURE AS A PARADIGM OF SUSTAINABLE REGIONAL DEVELOPMENT
Olympia Papaioannou, Leonidas Argyros, Maria Manola, Foteini Maniou
- 15:45-16:00 T02037 THE LITERARY HAUNTS OF ATHENS AND THEIR SIGNIFICANCE IN THE CULTURAL HERITAGE OF GREECE
Maria Manola, Georgios Koltsikoglou, Taxiarchis Vouglanis
- 16:00-16:15 T02050 MONASTERIAL MANUSCRIPTS AND THEIR SIGNIFICANCE IN LOCAL DEVELOPMENT AND EDUCATION
Costas Trikalitis, Manola Maria
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- Pre-organised Special Session: “Maritime Spatial Planning, Insular Policies and Sustainable Development”**
Organised and chaired by Prof Stella-Sophia Kyvelou-Chiotini
(Room A5) (main building)
- 14:30-14:45 T02093 REVIEW OF SDG14: IMPLEMENTATION STRATEGIES AND POLICIES IN EU COUNTRIES FOR SUSTAINABLE COASTAL/MARINE AREAS AND MARINE LIFE
Nikolaos Moraitakis, Constantine Manasakis
- 14:45-15:00 T02084 ASSESSING INTEGRATION OF SOCIO-CULTURAL DATA IN MARITIME SPATIAL PLANNING: THE CASE STUDY OF KASOS ISLAND IN SOUTH AEGEAN REGION
Eirini Aikaterini Barianaki, Stella-Sofia Kyvelou-Chiotini
- 15:00-15:15 T02174 THE IMPACT OF MICROPLASTICS IN COASTAL AREAS: A COMPREHENSIVE REVIEW
Valentina Phinikettou, Voukkali Irene, Iliana Papamichael, Antonis Zorpas
- 15:15-15:30 T02181 MULTI-USE OF THE MARINE SPACE: THE CASE OF OWFS IN MSP AND SUSTAINABLE DEVELOPMENT
Ioanna-Vasiliki Pothitaki, Stella-Sofia Kyvelou-Chiotini

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- 15:30-15:45 T02182 INTRODUCING A NOISE FOOTPRINT TOOL TO ASSESS IMPACTS OF OFFSHORE INFRASTRUCTURES ON UNDERWATER SOUNDSCAPES
Aggelos Tsaligopoulos, Stella-Sofia Kyvelou-Chiotini
- 15:45-16:00 Discussion
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- ThematicSession: “Climate Change and Sustainable Energy Issues”**
Chaired by Prof Andrea Colantoni
(Room A6) (main building)
- 14:30-14:45 T02177 DEVELOPING THE REGULATORY FRAMEWORK ON ENERGY SANDBOXES AS A WAY TO REDUCE THE ENERGY POVERTY OF THE POPULATION
Natalia Zamfir
- 14:45-15:00 T02052 SPATIAL GOVERNANCE AND ADAPTATION TO CLIMATE CHANGE. AN APPLICATION TO THE MUNICIPALITY OF PENTELIATTICA, GREECE
Iro Verroiopoulou, Evangelos Asprogerakas
- 15:00-15:15 T02146 PATRAS 2050: THE IMPACT OF CLIMATE CRISIS IN PATRAS THROUGH CARTOGRAPHIC MAPPING
Aikaterini Tempeli
- 15:15-15:30 T02160 CLIMATE NEUTRALITY PLAN UNTIL 2030 FOR MUNICIPALITY OF IOANNINA, EPIRUS, GREECE
Angelos Chasiotis, Stefanos Chasiotis, Fanis Manthos, Maria Bousdeki, Katerina Vini, Panos Voulelis, Kosta Karatsolis, Ifigeneia Tsakalogianni, Athina Michalakea, Maria Siti, Thanos Vlastos, Ioannis Aesopos, Giorgos Panetsos
- 15:30-15:45 T02175 NATURAL DISASTERS IN GREECE AND SUSTAINABILITY. CASE STUDIES FROM THE REGION OF ATTICA
Nektaria Karpouzou, Agisilaos Economou
- 15:45-16:00 T02163 A COMPREHENSIVE EXPLORATION OF BUILDING-INTEGRATED PHOTOVOLTAICS AND URBAN DESIGN STRATEGIES IN LULEÅ, SWEDEN AND LIMASSOL, CYPRUS
Andreas Savvides, Constantinos Vassiliades, Ioannis Vardopoulos, Kevin Lau, Agatino Rizzo

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Chaired by Prof Aspa Gospodini
(Room A1) (main building)

- 09:00-09:15 T02042 CULTURAL TOURISM PROSPECTS EXAMINED BY SPACE SYNTAX: THE CASE OF THE HISTORIC CORE OF SOMBOR, SERBIA
Branislav Antonić, Aleksandra Djukić, Jelena Marić
- 09:15-09:30 T02044 PHOTOGRAPHIC TESTIMONIES AS CATALYST FOR SUSTAINABLE REGIONAL DEVELOPMENT IN ALTERNATIVE TOURISM: A CASE STUDY OF INACCESSIBLE PANIGIRIA (FESTIVALS) IN SIFNOS, GREECE
Vasiliki Tsilimpokou, Grigorios Vlassas, Vasileios Vlassas
- 09:30-09:45 T02072 CULTURAL ROUTES AS A FACTOR OF SUSTAINABLE MANAGEMENT OF CULTURAL RESERVE AND DEVELOPMENT OF CULTURAL TOURISM
Theodoros Rachiotis, Panoraia Poulaki
- 09:45-10:00 T02126 PROTECTED AREAS AS A TOOLBOX FOR SUSTAINABLE ECOTOURISM DEVELOPMENT. THE CASE OF PARNITHA
Georgios Karagiannis
- 10:00-10:15 T02136 ENVIRONMENTAL MANAGEMENT OF NEW ECOTOURISM AREAS: THE CASE OF MILI GORGE
Ioannis Boumpouresis, Ioannis Kazoglou, Anna Boumpouresi, Ioanna Konstantinidou, Georgia Chroni
- 10:15-10:30 T02138 INVESTIGATION OF ACHIEVING SUSTAINABLE DEVELOPMENT OF AGRITOURISM - ECOTOURISM IN THE WIDER AREA OF LAKE KARLA
Trakala Georgia, Martinis Aristotelis, Zagas Theocharis, Karris Georgios, Tsiroukis Achilleas

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Pre-organised Special Session: “Historic urban conservation approaches”
Organised and chaired by Assoc Prof Despina Dimelli
(Room A1) (main building)

- 11:00-11:15 T02176 SUSTAINABLE URBAN MOBILITY IN HISTORIC CENTERS
Irina Chatzidaki, Despina Dimelli

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- 11:15-11:30 T02148 URBAN CONSERVATION PRINCIPLES AND HISTORIC URBAN FORMS: THE CASE OF RETHIMNO HISTORIC CENTER
Evangelia Stagaki, Despina Dimelli
- 11:30-11:45 T02117 MODERN STRATEGIES OF HISTORIC URBAN CONSERVATION. THE CASE OF THE OLD TOWN OF NAFPLION
Xanthippi Bitsakaki, Despina Dimelli
- 11:45-12:00 T02169 SUSTAINABLE MOBILITY: A REVIEW OF STRATEGIES AND ACTIONS IN HISTORICAL CITY CENTERS
Nefeli-Evangelia Alexopoulou
- 12:00-12:15 Discussion

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Thematic Session: “Tourism and Sustainable Development”
Chaired by Prof Luca Salvati
(Room A2) (main building)

- 09:00-09:15 T02023 THE DEVELOPMENT OF CLUSTERS AS A FACTOR INFLUENCING SUSTAINABLE TOURISM IN ARGOLIS
Sereti Evangelia - Paraskevi
- 09:15-09:30 T02040 TOURIST PROMOTION OF WETLANDS. PROTECTION AND EXCLUSION.
Maro Krasopoulou
- 09:30-09:45 T02092 TOURISM AND SUSTAINABLE DEVELOPMENT: THE CASE OF CENTRAL MACEDONIA IN GREECE
George Zografos, Antonios Adamopoulos
- 09:45-10:00 T02099 TOURIST PORTS AT THE SEAFRONT OF THE ATHENIAN RIVIERA
Theodora Giantsi, John Iatrou
- 10:00-10:15 T02143 NOVEL ICT TOOL FOR THE DEVELOPMENT OF SUSTAINABLE TOURISM
Dimitrios Aidonis, Charisios Achillas, Vasileios Dimou, Evangelos Karavaggelis
- 10:15-10:30 T02144 SUSTAINABLE TOURISM DEVELOPMENT IN THE DELPHI-THERMOPYLAE AREA, REGION OF CENTRAL GREECE
Caterina Basakali, Foteini Stefani, Alexandra Mexa, Athina Spakouri

10.30-11.00 Coffee Break

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Thematic Session: “Society and Sustainable Development”
Chaired by Assoc Prof Vasiliki Delitheou
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- 11:00-11:15 T02049 DISABLED PEOPLE AND SUSTAINABLE CITIES - A BENEFICIAL RELATIONSHIP
Maria Poli, Konstantinos N. Malagas
- 11:15-11:30 T02107 TEACHING EXCELLENCE AS A PREREQUISITE OF INCLUSION: A LONGITUDINAL STUDY OF FACTORS THAT GUARANTEE SOCIAL INCLUSION
Eirini Karampasi, Efstratios Papanis
- 11:30-11:45 T02115 FROM ROADS TO RELATIONSHIPS: STAKEHOLDER ENGAGEMENT STRATEGIES FOR SOCIAL RESILIENCE IN THE A14 IMPROVEMENT SCHEME (UK)
Tatiana Ruchinskaya
- 11:45-12:00 T02155 SOCIAL INNOVATION AS A FACTOR FOR THE MIGRANTS’ SOCIAL INTEGRATION ON A LOCAL LEVEL
Panagiota Karametou, Eleftheria Nteliou, Yannis Georgiou
- 12:00-12:15 T02085 THE ENERGY POVERTY PHENOMENON IN GREEK REGIONS
Vasiliki Delitheou, Evanthia Michalaki
- 12:15-12:30 T02053 FRICTIONS OF URBANIZATION IN ETHIOPIA: CONVENTIONAL SPATIAL PLANNING VS INDIGENOUS SEFER MAKING
Wossen Gebreyohannes Balcha, Anton Van Rompaey
- 12:30-12:45 T02039 THE ROLE AND CONTRIBUTION OF SUSTAINABLE LEADERSHIP IN CONTEMPORARY WORK ENVIRONMENTS
Maria Dologlou
- 12:45-13:00 T02196 COMPARATIVE STUDY OF DRUG CONSUMPTION IN LARGE URBAN CENTERS AND GREEK PROVINCES
Maria Derventi, Roido Mitoula, Eleni Theodoropoulou, Vilelmini Karagianni

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Pre-organised Special Session: “Cities Physiognomy”
Organised and chaired by Joseph Stefanou & Roido Mitoula
(Amphitheater: Georgios Karabatzos) (main building)

- 09:00-09:15 T02121 THE FORMATION OF THE PHYSIOGNOMY OF THE MUNICIPALITY OF VIRONAS. THE OPINION OF RESIDENTS AND VISITORS.
Konstantinos Saitis
- 09:15-09:30 T02128 THE FORMATION OF THE PHYSIOGNOMY OF THE CITY OF THIVA THE OPINION OF RESIDENTS AND VISITORS.
Myrto Leventaki

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09:30-09:45 T02134 THE FORMATION OF THE PHYSIOGNOMY OF THE CITY OF ARTA. THE OPINION OF RESIDENTS AND VISITORS.
Panagiotis Acheimastos

09:45-10:00 T02062 THE FORMATION OF THE PHYSIOGNOMY OF THE CITY OF BERLIN, GERMANY. THE OPINION OF RESIDENTS AND VISITORS.
Ioulia Tsagakari

10:00-10:15 T02127 THE FORMATION OF THE PHYSIOGNOMY OF THE CITY OF IASI -ROMANIA THE OPINION OF RESIDENTS AND VISITORS.
Gavriela Ioannidou

10:15-10:30 T02132 THE FORMATION OF THE PHYSIOGNOMY OF THE CITY OF KERATSINI - THE OPINION OF RESIDENTS AND VISITORS
Alexandros Ioannidis

10.30-11.00 Coffee Break

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Pre-organised Special Session: “Coastal Cities Physiognomy and sustainability”
Organised and chaired by Joseph Stefanou & Agisilaos Economou
(Amphitheater: Georgios Karabatzos) (main building)

11:00-11:15 T02120 THE FORMATION OF THE PHYSIOGNOMY OF THE ISLAND OF CHIOS - THE OPINION OF RESIDENTS AND VISITORS
Anastasia Ioanna Brouma

11:15-11:30 T02130 THE FORMATION OF THE PHYSIOGNOMY OF THE CITY OF ALEXANDROUPOLI - THE OPINION OF RESIDENTS AND VISITORS
Melina Boutselaki

11:30-11:45 T02113 ERMOUPOLI, AN OPEN CITY IN A MEDITERRANEAN ISLAND. THE PHYSIOGNOMY OF THE CITY.
Sotirios Drosis

11:45-12:00 T02088 SUSTAINABLE PROMOTION OF A CULTURAL ROUTE THROUGH AUGMENTED REALITY: THE CASE OF THE STEPS OF THE APOSTLE PAUL
Vasileios Dimou, Evaggelos Karavaggelis, Tsagkalidou Eirini

12:00-12:15 T02104 HIGHLIGHTING THE PHYSIOGNOMY OF ANO SYROS THROUGH “CREATIVITY”
Georgia Eleftheraki, Aikaterini Sougioltzi, Konstantina Kollyri, Kalliopi Ntoska, Evgenia Vamvakousi

Closing of the Conference

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GLOBAL GOAL 11 FOR SUSTAINABLE CITY DEVELOPMENT

T02188

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Abstract

In recent years, the issues of cities have become the subject of research and study and the main goal is to raise the awareness of citizens and authorities on the issues of the sustainability of the natural, economic, cultural and social urban environment. Sustainability is indeed a challenge for local and public authorities, who recognize that achieving it is a continuous and complex process. Poverty, pollution, inequality between citizens, excessive consumption, are problems that require solutions and that concern not only central and local authorities, but also individual citizens, since individual responsibility is the most important issue that arises when we talk for collective effort.

The purpose of this paper is the presentation of Global Goal 11 which concerns "Sustainable Cities and Communities" and the assessment of the contribution of authorities and citizens to its achievement. First, the global goal 11 is described, the existing situation and the actions of the EU, Greece and the local authorities are briefly presented and then, in conclusion, individual actions are proposed that can be developed at an individual level by each citizen separately with the aim of achievement of the objective in question.

Keywords: Goal 11, SDG, Sustainable City Development

**CULTURAL ECOLOGY AND POLITICAL SUSTAINABILITY:
PROMOTING THE IDENTITY OF PLACE IN URBAN AND
REGIONAL LANDSCAPE CONTEXT**

T02033

Dr. Konstantinos Moraitis

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Ph.D. in Architecture and Landscape Design

Professor Emeritus, School of Architecture NTUA

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In 1989, French psychoanalyst Félix Guattari insisted on the fact that we cannot hope for positive ‘natural ecology’ approaches without our mental participation, our ‘mental ecology’ participation and, moreover, without our social awareness constituting ‘social ecology’. It is in this context that *our contemporary ecological environmental sensitivity ought to be affirmed as ‘cultural ecological’ thinking, as a general cultural formation and ought to demand, as well, the ‘political sustainability’ of our societies, for the safeguard of our environment in general and our cities in particular.*

The two exemplary projects that will be presented, refer to the demand of political and environmental consciousness for urban citizens. The first of them refers to an Athenian urban square. Besides the new proposed plantation of the territory, the formation of the square will be dedicated to political didactics, concerning the Greek refugees’ persecution from Minor Asia in 1922 and the contemporary refugees and immigrants’ reality in Greece and Europe. The proposed didactic narratives would be organized through hybrid guidance, in real and digital space. The second project refers to the Historical Botanic Garden of Thessaly, proposed to be created in the city of Larissa. The garden that would depict the map of ancient Thessaly, reproducing its ancient environmental formation, is described under the title ‘Deucalion’s Cycle’. According to the ancient myth, Deucalion, and his wife Pyrrha, were the only human beings survived from a destructive cataclysm. After the end of the flood, the surviving pair of humans arrived at Thessaly and recreated the Hellenic population in a miraculous way. When this project was proposed, the designers of the garden had not the experience of the recent destructive floods in the same place of reference, in the plain of Thessaly. Now, they may have to present in a hybrid real place and digital narration, analogous to that of the previous project, not only the historical memory of the ancient geographical formation and flora of the territory in question, not solely its ancient cities, but also the political need for contemporary environmental awareness.

Keywords: Cultural ecology, political sustainability, identity of place

**SUSTAINABLE URBAN DESIGN FOR A SMALL CITY
DEVELOPMENT: THE PROJECT VELES 2.0**

T02028

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Abstract

In terms of quantity, small and mid-size cities comprehend more than half of the urban population, and represent the predominant urban context of North Macedonia today. Most of them appeared in the second half of the XIX century but their urban development was highly instigated after the Second World War with economy and urban development reflecting the continuous industrial growth between late 1950s and mid-1980s. In this period the whole socio-economic and cultural establishment of those cities were in direct connection with the strength of the industrial capacities providing employment for the inhabitants.

The lecture presents a design approach that faces the challenges derived from the so-called transition that started in the early 1990s, with the political and economic shift of the country from socialism to capitalism. This brought a collapse of the state economy and made most of the industrial facilities economically obsolete, devastated or underused.

The lecture reveals a methodology for an urban development project for the small former industrial city of Veles. Although this city today does not have the economy, nor the demographic intensity as the big cities, it still needs sustainable and creative ways to direct its further growth. The applied design approach is based on scale as a key design tool: The scale of geography that reflects the strategic aspects of planning and positions the singularity of the existing small city within a network of small cities, the scale of immediate city which encompass the adjustment of existing infrastructure as a base for future urban planning development, and the scale of the neighbourhood that introduce urban design and architecture as two disciplines that guide the sustainable city development by including socio-cultural and economic growth.

The presented project shows a possible scenario in which one dilapidated city could transform its narrative from heavy industrial environment to sustainable service driven city oriented towards new modalities of creative industries.

Key words: small cities, scale, urban design, sustainable urban development

COWORKING AND HYBRID SPACES ENHANCING LOCAL AND REGIONAL SUSTAINABLE DEVELOPMENT

T02035

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Abstract

Collaborative spaces (e.g., coworking spaces, open workshops; living labs) have grown more hybrid with the availability of physical space, digital data, and communication networks. Besides, hybridization has also accelerated during and after the COVID-19 pandemic when remote workers and hybrid workers demanded workspaces outside their homes. A space can also be considered hybrid in time and space, meaning it can host several activities in different spaces and at different times of the day.

Some studies have focused on the effects of coworking spaces and hybrid spaces on the local context of urban and non-urban areas. Providing various types of collaborative and hybrid spaces has become a common practice to assist employment creation and regeneration in a variety of geographic contexts, from prosperous cities to more stagnant economies. Nevertheless, it is crucial these spaces contribute to developing community wellbeing, especially in non-urban areas.

Coworking and hybrid spaces can enhance local and regional sustainable development in several ways. They may contribute to the near-working strategies promoted in large cities and non-urban areas with the aim to reduce commuting, congestion, and out-migration. In non-urban and rural areas, they can focus on retaining, training, and attracting younger and higher-skilled workers and support younger entrepreneurs and start-ups, thus enhancing social inclusion. As a bridge between users and the external actors of the larger local (entrepreneurial and innovation) ecosystem, they can help local ecosystems function by providing assistance, mentorship, and a professional network. Finally, they may also develop and/or manage solidarity activities and welfare services and engage in social innovation with local communities.

The present paper enriches the existing literature by analysing and discussing some best practices of coworking and hybrid spaces in European rural areas aiming to promote local and regional sustainable development. Public-led and private initiatives are explored through desk research and interviews with representative stakeholders.

Keywords: coworking spaces, hybrid spaces, sustainable development, rural areas

BOOK OF ABSTRACTS

1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

SOCIO-ECONOMIC INEQUALITIES AND FATALITY RATES FROM COVID-19: EVIDENCE FROM THE MUNICIPALITIES ACROSS ATHENS METROPOLITAN AREA

T02036

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Abstract

The aim of this presentation is to explore the geographical variations and patterns of deaths and incidences from Covid-19 across Municipalities in Greater Athens Metropolitan area. Analysis is based on a novel dataset which includes detailed statistical information on numbers of confirmed cases and diagnosed deaths of Covid-19 by Municipality during the period 26-10-2022 to 22-3-2022. Data are disaggregated by 10-year age groups and six waves of the disease. Furthermore, database includes economic, social, demographic, environmental, epidemiological and geographical variables for the Athenian Municipalities. The cartographic and econometric analysis offers the opportunity to examine the correlation of incidence and deaths from Covid-19 with the socio-economic conditions at the Municipal level in Athens Metropolitan. Apart from the significant findings this paper presents policy proposals in order to make metropolitan areas more resilience to similar episodes in the future.

Key words: Income inequalities, Covid-19, metropolitan areas, municipalities, Athens

CIRCULAR ECONOMY AS A PILLAR TO REGIONAL DEVELOPMENT

T02106

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Abstract

Circular economy (CE) has emerged as an indisputable means to battle global challenges related to environmental devastation which no longer can provide for the needs of increased population. The concept of a CE highlights the need to rethink existing economic systems in order to increase resource efficiency, turn waste into resources and implement new approaches to consumption and production; hence lead to more sustainable (thus less vulnerable) economic systems. We hereby claim that regions have a significant role to play in this field, and therefore, capture the benefits of new economic and business models. Indeed, cities and regions are many times leaders in change and innovation, mainly due to their scale and controllable economic systems and their proximity to local experience with stakeholders (CIRCTER, 2019).

Circular economy provides a wide field of innovative solutions which drive economic and social development. Developing circular economy business models at a regional and city level, may advance entrepreneurship, lower costs, advance quality of products and services, build loyal customers, spur employment opportunities, beneficial partnerships, build societal integration.

Implementing CE at a city and regional level gives the opportunity for cooperation within a country or a Union and enables solutions that are not that easily implemented at a macro level, given the regional disparities and needs.

Key words: Circular economy, economic systems, waste, resources, innovation.

ORIGIN AND FUTURE OF THE X-MINUTE CITY

T02192

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Abstract

Time-related urban modules based on walking distances - 5-minute for 400m, 10-minute for 800m, 15-minute for 1200m - emerged as urban design and planning tools that would heal the environmental and social impacts of the automobile age. However, it was the Covid-19 pandemic that fuelled a global trend toward localization and offered a ‘performance preview’ of a healthier lifestyle in urban models with fewer commutes and more walking, more free time and ‘greener’ neighbourhoods.

Aligned with this trend, City Models where daily needs can be reached in few minutes from home on foot, bike, or public transport are globally pursued: Paris pilots the 15-Minute City, cities of Australia and UK the 20-Minute City, originally coined in Portland, Oregon, while Sweden introduced a hyper- local module, the 1-Minute City.

Yet, most of the ideas and principles underpinning X-minute City concepts are not new. This presentation examines both ideal and real city plans derived from the past and reveals the hidden origins and the underlying persistence of the 5-,10-,15-minute modules along with their varied aspects in their urban forms. It critically discusses the findings from historic cases where city modules are functions of walking time, ranging from Filarete's Sforzinda to Scamozzi's Palmanova and from Hebrard's World Centre of Communication to his Thessaloniki Reconstruction Plan.

Alluding to the European Commission's Green Deal initiative to improve the well-being and health of citizens and future generations, we will elaborate on city planning paradigms so as to advocate the matching of sustainability and time-related planning in the pursuit of an innovative framework towards the green transformation and the creation of eco-social urban systems.

Key words: Sustainable city, X-minute city

**CREATION OF SOCIAL NETWORKS FOR THE IDENTIFICATION
AND SUPPORT OF SPATIAL UNITS OF CULTURAL HERITAGE.
THE CASE OF THE PAGASETIC GULF.**

T02197

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Abstract

Coastal and maritime cultural heritage in Greece often appears as under-exploited pieces of heritage due to main weaknesses such as

- dispersed locations with low level of accessibility by both visitors and local communities,
- absence of a decentralized governance model,
- overlapping of responsibilities among authorities in terms of planning and management and,
- the absence of both specialized authority-structures and monitoring mechanisms.

This paper concerns coastal and maritime underwater cultural Heritage in West Pagasetic Gulf and how they may be spatially and socially integrated by creating Social Networks and Observation Mechanisms. The paper is grounded on the ongoing research project “*Developing an Observation Network for Maritime Cultural Heritage (MCH/UCH) in Greece*” - acronym HER-Sea -financed by ELIDEK, with the collaboration of three academic partners: Panteion University, University of Thessaly and University of The Aegean. HER-Sea investigates costal and maritime areas in two pilot cases of research: (a) south Dodecanese islands/eastern Crete and (b) west Pagasetic Gulf. The main research objective of HER-Sea is identifying and mapping the cultural distinctiveness of the Aegean Sea, as defined by the quality of its natural and cultural resources, its inexhaustible natural and cultural capital, and the strong cultural impact the area has had over the centuries, thus promoting the Aegean archipelago as an “*imaginary museum of global scope*”.

The methodology of research consists of the following:

- a) Identification and assessment of significant areas in terms of coastal and maritime cultural Heritage.
- b) Analysis and assessment of cultural ecosystem services using GIS, Public Participation built on participative processes and nexus methodology approach.
- c) Evaluation of the contribution of cultural heritage significant areas to tourism added value and development.
- d) Proposing continuous Monitoring Mechanisms based on interactive GIS maps.
- e) Presenting existing governance models and highlighting governance issues such as the role of EC, national, regional and local authorities, the role of public and private sector, other type of stakeholders, top down or bottom-up approaches, public and private tourism investments.
- f) Proposing new decentralised governance model in each spatial cluster of coastal and maritime cultural heritage, based on stakeholder participation mechanisms, bottom-up approaches of social interaction, steering committee of cultural heritage.

Keywords: coastal and maritime cultural heritage, enhancement into maritime spatial planning, social networks and observation mechanisms, governance models, Aegean Sea, Greece.

**ECONOMIC GROWTH, URBANIZATION, DEMOGRAPHIC
DYNAMICS AND THE IMPLICATIONS FOR LAND RESOURCE
MANAGEMENT IN THE MEDITERRANEAN REGION**

T02034

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Abstract

While urbanization has been closely related to economic development and demographic change, heterogeneous patterns and processes of regional growth and change reflect the uneven distribution of urbanization, the subtle impact of demographic dynamics and the consequent implications for land resource management and environmental sustainability. Differences in patterns of urban growth and change in a paradigmatic region such as the Mediterranean basin —often masked by statistics indicating a net increase in urban population—reflect regional divides in socio-demographic, economic and environmental variables. To better understand the impacts of these regional differences, interdisciplinary research should better link socio-demographic and economic patterns from the one side - and environmental dynamics from the other side - to urbanization and regional/local processes of change. Going from regional to local, multi-scale analysis of environmental change gives more opportunities to ascertain the combined effect of demographic dynamics on urbanization, evidencing the role of social transformations and the latent linkage with ‘hegemonic’ concepts such as that of land degradation, which is intimately related with both socioeconomic dynamics and environmental sustainability. Reconnecting impacts of regional-scale socioeconomic change with local-scale ecological dynamics definitely contributes to an enriched knowledge of environmental histories, outlining how a study of differences under assumptions of non-linearity and complex system thinking is key to understand future socio-environmental trends in the study region. This contribution finally encourages studies within a multi-disciplinary arena, stimulating further literature reviews aimed at discussing these deserving issues - proposing new theoretical frameworks at the same time, with empirical approaches, comparative works and case studies providing the necessary, informed ground to science and policy.

Keywords: Economic growth, urbanization, demographic dynamics, mediteranean region

Pre-organised Special Session:

“The Necessity for Cultural and Political Sustainability: Critical Approaches to Real or Virtual Formations of Landscape and the City”

Organized by Prof Konstantinos Moraitis

**ECOTOPIA OF PLAY: “ECOSOPHIC” GAME-DESIGN TOWARDS
REGENERATIVE CULTURES**

T02095

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Abstract

Arguably, the concept of “sustainability” has to deal with a most complicated multiplicity of environmental (biological, climatic), social (cultural, political) and personal (mental, psychosomatic) factors, in ways that, at least according to some of the most influential contemporary scientific views, ought to be treated as inseparable. To that direction, a crucial stream of thought in the era of urban public space and landscape architecture highlights the importance of the so-called “Serious Games” (which aim for wide educational and political impact beyond mere entertainment), along with the application of certain “smart” Game-Design and Gamification techniques, which have gained much attention (theoretical and practical) over the last few decades.

In that context, I am going to present parts of my doctoral thesis, which focuses on the interdisciplinary study of the multifaceted phenomena of Play and Games, with the intention of deepening their multi-meaning concepts and different theoretical and philosophical approaches, as well as their multiple "architectural" aspects – functional, constructional and aesthetic: ie their forms, structures, types, ways - methods and the sets of space-time parameters in which they take place (imaginary, real, representational-symbolic, digital, hybrid etc.), along with the corresponding types of enjoyment they activate, as well as with the ethical values, ideologies and political stances they reflect.

Based on this theoretical (descriptive) dimension, my research attempts an extension to a more practical (normative-evaluative) level, through design-based methods, focusing on the possibilities of creating new games (or/and applying existing ones) in a direction that favors the general framework of ideas of PoliticalEcology and the related political movement of Degrowth [Latouche, 2009], with a special emphasis on the concept of "Ecosophy", as an Ecological Philosophy that promotes an "ethical-political articulation of Environmental, Social and Mental Ecology" [Guattari, The Three Ecologies, 1991].

On that ground, my proposal emphasizes on the constitution of “Ecosophic” Games, ie multi-thematic “eco-socio-mental meta-games”, focusing mainly on aspects of Regenerative (Agri)Culture design-methods, which can be briefly described as a set of principles and techniques aiming beyond sustainability (in the sense that they seek not only neutral but positive overall ecological footprint outcomes), in ways that tend “by nature” to interrelate all spatial possibilities (urban, suburban or natural landscape formations). To this end, I find purposeful to present some relevant case studies drawn from my participation in academic research programs and architectural competitions regarding the regeneration of large-scale public spaces in the city of Athens, through a design strategy which I describe as “Ludic Eco-scape Architecture”.

Key Words: Play-Theory, Ludology, Serious Games, Game-Design, Gamification, Ludic Architecture, Political Ecology, Degrowth, Ecosophy, Regenerative (Agri)Culture,

**AN INVESTIGATION OF THE POTENTIAL OF PARTICIPATORY
LANDSCAPE ASSESSMENT THROUGH CROWDSOURCING
WITHIN UNIVERSITY EDUCATION**

T02168

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Abstract

In many ways the technologies used in university education have remained static over recent decades. So far, other than the transition from slide projectors to digital projectors, few new technologies can be found which have been utilized extensively for educational applications. At the same time, the developments in information technologies and their accessibility to the public has soared. The lack of their integration of such technologies in education is made even more evident within university level education, since most university-level students are almost certain to own and use a smartphone, which could be utilized for educational purposes in many ways.

In this study we investigated how education in matters of landscape and architecture could become more interactive and synergetic, by allowing students to engage in participatory landscape assessment. The investigation was carried out initially theoretically, investigating the potential benefits of this gesture from an educational and scientific perspective, in contrast to current methods and to similar efforts in the literature. Then the idea was also examined in practice. In particular, it was investigated whether students would be interested to voluntarily partake in a participatory landscape assessment scheme through the use of a mobile crowdsourcing app for smartphones. This investigation was carried out in the context of a new course section that was introduced in the academic curriculum of the School of Civil Engineering of NTUA, named “Built Environment and Landscape”. The results demonstrated that both in terms of educational and scientific utility and in terms of students’ willingness for participation, crowdsourcing presents a promising potential.

Keywords: participatory, landscape, crowdsourcing, education, built environment, architecture, university

PLACES OF VIOLENCE - LANDSCAPES OF MEMORY

T02125

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Abstract

On account of the fact that urban public space, as a palimpsest of social interactions, spatially embodies the political role of landscape, the proposed paper will attempt to investigate the way a landscape, representing the “traumatic” past or in other words, the repressed memory of violence and death, is formed. As this landscape symbolically represents the “traumatic” dichotomy provoked by the aforementioned memory, it would be worth exploring the way the monument becomes the site of contested and competing meanings, more likely the site of cultural conflict rather than of shared national values and ideals.

Professor Pierre Nora claims that “the memory is directly linked to spaces while history is interrelated to events”, acknowledging thus, the inseparable relation of monuments to their landscape surroundings in which they are integrated, so as for the public to be able to perceive their cultural value as a whole.

For these memorial spaces, their determining relationship to their surrounding landscape stems from the interaction of memory with history, in such a way that memory acts as a means of representation of the past which defines the present (and the future). And if this is true for the collective memory, then how a landscape is shaped, where the ambiguous symbiosis of memory and oblivion is inscribed? How does one record and comment the “absence” or “horror” in public space? How does one manage memory or worse, grief? Most importantly, what does a monument stand for in terms of the position a nation wishes to occupy within the course of history?

The memorial landscapes that have been selected for this research constitute primarily monuments of violence and include the one for the victims of State terrorism (Argentina), for the victims of violence (Mexico), for the victims of freedom of the speech (Lebanon), for the victims of Holocaust (Germany and USA) and for the Veterans of the Vietnam War (USA). All these landscapes are asked to deal with issues on one hand, related to the representation of the traumatic memory which is denatured into a cultural (national) trauma and on the other hand, related to the importance of remembering the “invisible” and administering social justice.

Key words: monuments of violence, landscapes of memory, “traumatic” memory, cultural trauma, ambiguous symbiosis

**PLACE BRANDING AND THE ANCIENT GREEK IMAGINARY:
THE CASE OF LESBOS ISLAND AS AN EXAMPLE FOR THE
CREATION OF GREEK NATIONAL NETWORK OF ASSOCIATIVE
CULTURAL LANDSCAPES**

T02103

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This research is a postgraduate thesis of the author. It explores the ancient Greek imaginary as a utilizable resource that can contribute to the regional and national development of the country. Specifically, a model of place branding is established, taking as a case study the island of Lesbos. The tracking of Lesbos' place-identity is structured on the basis of its real and associative landscape. The latter concerns the subjective perceptions of the place, where the lyric eroticism emerged as a predominant element projected on Lesbos, thanks to the plethora of remarkable litterateurs associated with the island. Its natural scenery is governed by diversity and contrasts, while its anthropogenic landscape is a palimpsest of Western and Eastern culture. Based on this, it is proposed to develop a network of associative cultural landscapes, which are related to the island's ancient Greek imaginary. For the design of this network, three studies are presented which serve as models for the following topics:

1. Model of architectural enhancement of imaginary/associative cultural landscapes
2. Model of cultural routes design
3. Model of landscape networks' spatial planning

Then, an attempt is made to extend the proposed model from regional to national scale, utilizing narratives of the ancient Greek imaginary. A proposal is made for the implementation of a tourist model that creates cultural corridors both within the country and transnationally on the basis of the dominant categorization of Greek mythology.

Specifically, in the case of Greece, there is a unique scope of opportunities in the exploitation of the ancient Greek mythical landscape, which is of constitutional importance for Western culture. Finally, through the case studies that have been analyzed, it became clear that architectural and landscape design can successfully act as spatial storytelling tools of place narratives.

Keywords: place identity, Lesbos, ancient Greece, intangible cultural heritage, place narratives, storytelling, itineraries' networks

**REVOLUTIONIZING URBAN DESIGN AND PLANNING:
EMBRACING ADVANCED DIGITAL TOOLS FOR A SUSTAINABLE
AND INCLUSIVE FUTURE**

T02139

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Abstract

New digital tools can enhance the planning and design process by providing more accurate and comprehensive data, allowing architects and urban planners to create more efficient and sustainable solutions. For example, 3D modelling can help simulate the impact of proposed changes on the urban environment, while photogrammetry can provide detailed measurements and imagery for better analysis.

Additionally, Virtual and Augmented Reality applications can allow stakeholders and community members to experience and interact with proposed designs in a more immersive and intuitive way. This can lead to greater public engagement and participation in the decision-making process, ultimately resulting in more inclusive and community-centric urban design.

Furthermore, integrating AI technologies into urban facilities can improve efficiency and effectiveness in various areas, such as energy management, traffic control, and emergency response systems. AI algorithms can analyze large amounts of data in real-time to make informed and proactive decisions, leading to better resource allocation and overall urban management.

In this rapidly evolving digital era, architects and urban planners need to embrace these advancements and acquire the necessary skills to effectively use these digital tools. This includes not only technical skills but also a deep understanding of how these tools can be integrated to enhance their expertise and contribute to more sustainable and equitable urban environments.

Ultimately, the integration of advanced technologies in urban design and planning has the potential to revolutionize the field and create new opportunities for architects and urban planners to shape our cities in a more sustainable, inclusive, and resilient way. By embracing these tools, professionals can tackle the complex challenges our society faces and create urban spaces that better reflect the needs and aspirations of their communities.

Key words: public sector, urbanism, digital ecosystem, method integration

**RE-EXAMINING AND REVISITING THE LANDSCAPE
IN TERMS OF INTANGIBLE-MATERIAL CULTURE AND
SUSTAINABILITY: A CASE STUDY FOR THE AREA-REGION OF
ELASSONA IN THESSAL**

T02069

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Abstract

Every attempt to define and describe a landscape, apart from referring to visible and natural features of its area of land, is bound to consider culture, both its tangible and intangible dimension. In fact, culture is the agent and the land is the medium, resulting in the landscape. In addition combining both the physical origin and the cultural overlay of human presence, every landscape reflects a living synthesis of people and place that is vital to local and national identity. On the other hand, sustainability is the ability to maintain or support a process, any process, over time and is often broken into three core concepts: economic, environmental, and social. Incorporating sustainability into a landscape is the main challenge and a *sustainable landscape should be* responsive to the environment, regenerative and actively contribute to the development of a healthy area.

The above concepts are examined, as a case study, for Ellassona an area- region situated in central Greece in the administrative Region of Thessaly. Ellassona accounts for 25,459 inhabitants according to the census of 2021, including 60 communities and defines a typical Greek rural landscape. The area- region is characterized by a strong geomorphological relief, since it is mainly mountainous and semi-mountainous and the highest mountain in Greece (Olympus) can be found in the area. Ellassona is a unique point of reference for the activities of the residents of the wider area of the northern part of Thessaly. This particularity, which was formed and developed historically on the basis of local conditions, however has important social and economic consequences in the current existing situation. A sustainable Ellassona prerequisites environmental, economic, political and social sustainability, namely cultural sustainability. The work that follows is a first attempt to identify the terms and map the content of cultural sustainability.

Keywords: Culture, Greece, Identity, Landscape, Mapping, Planning, Sustainability

Pre-organised Special Session:

“Coworking and hybrid spaces enhancing rural areas's sustainable development: evidence from the Cost Action CA18214”

Organised by Ilaria Mariotti, Carles Mendez-Ortega and Roido Mitoula

BOOK OF ABSTRACTS

1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

COLLABORATIVE SPACES PROMOTING YOUTH EMPLOYMENT INITIATIVES IN PERIPHERAL AREAS

T02101

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Abstract

Collaborative spaces can improve local and regional sustainable development. They may enhance near-working strategies aiming to reduce commuting, congestion, and out-migration (Mariotti et al., 2023; Merkel et al., 2023). Besides, they may promote training, retention, and attraction of young and talents, and support young start-ups and entrepreneurs (Bosworth et al., 2023; Manoukas, 2023). Several cases are observed in European rural and peripheral areas, developed by private, public and mix initiatives. Areas that provide more amenities associated with the quality of life tend to have advantages in attracting talent (Florida, 2002; Glaeser et al., 2001).

The present paper describes few case studies (private, public, or mixed) in peripheral areas in Europe (e.g., Sweden, Ireland, Italy, Spain) by presenting the results of desk research and qualitative data (interviews with stakeholders). Similarities and differences of the cases are discussed, and a focus is placed on whether and how the initiatives are economically sustainable, and replicable in other peripheral areas.

Key words: collaborative spaces, young, talents, startup, periphery.

**THE RISE OF CO-WORKING IN RURAL GREECE:
OPPORTUNITIES AND CHALLENGES FOR SUSTAINABLE
DEVELOPMENT**

T02046

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Abstract

The changing dynamics of the workplace structure in the global economy have led to the gradual emergence of co-working workplaces (CS) in rural areas around the world and in Greece. This study focuses on the challenges and unique opportunities for CS in non-urban areas. Historically focused on urban areas, CS is now expanding into rural areas, reshaping the business environment in these areas.

This research investigates in detail the geographical distribution, characteristics and potential contribution of CS to sustainable development in rural Greece. Rural CS represents an innovative way to promote entrepreneurship, professional networking, and knowledge exchange in areas where historically few economic opportunities are evident as rural workers seek alternative career paths, in those areas remove CS for the establishment of a flexible, locally oriented business environment.

The study draws on the extensive literature on CS, paying particular attention to the unique situation in rural Greece, and emphasizing their role as accelerators of innovation and social mobility. It provides valuable insights for policymakers and researchers interested in the evolving business environment in rural settings, providing a comprehensive analysis of how CS can drive economic activity, support innovation, and foster social cohesion has grown where such opportunities have traditionally been scarce. By understanding CS development in rural areas, this study contributes to a greater understanding of the potential of these areas to act as catalysts for sustainable development in non-urban areas.

Keywords: Greece, Co-Working Spaces, Sustainable Development, Rural Areas, Geographical Distribution

**USING ARTIFICIAL INTELLIGENCE AS A PROGRAM FOR
ANTICIPATING SHRINKING CITIES SCENARIOS**

T02032

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Abstract

This study is about Shrinking Cities and related problems such as demographic decline, real estate problems, lowering the income and other issues related to spatial changes. The effects are sometimes irreversible since losing certain opportunities make it impossible for the economy to recover. Analysis is very important since it can anticipate and predict negative scenarios in shrinking cities and could avoid spatial economic phenomena such as abandoned housing units, closing of businesses, schools, etc.

This paper is about cities and peripherals spatial relations and potential analysis of possible interventions in the city and their possible effects expressed through indicators such as: employment, use, occupation of housing units, creation of new business etc. The study will also take into consideration case studies and coworking spaces in particular as possible interventions to tackle shrinking cities phenomena. Coworking spaces can act as catalysers especially in creating working and training places for young people. Also, it is important to measure the potential impact of such interventions. Information technology can be used as a tool for territorial and urban interventions or building interventions, in order to analyze in advance, the effects of such interventions in the city and predict scenarios for growth. Such a methodology is expected to help city planners, municipalities including city developers to intervene with the right decisions based on pre-analyzed calculations. This methodology is expected to assist and lower the error possibility of wrong investment and increase the efficiency of doing the right interventions. Further it aims at improving the spatial and architectonic cityscape of what links building interventions to urban morphology.

Keywords: peripheral cities, planned scenarios, urban indicators, peripheral growth

BOOK OF ABSTRACTS

1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

UNLOCKING THE FUTURE OF COWORKING: AN ANALYSIS OF RURAL KNOWLEDGE HUBS

T02114

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Abstract

This paper conducts an analysis of rural coworking space placement in Bavaria, Germany, with a specific focus on their proximity to knowledge-intensive business services (KIBS) in the post-COVID era. Leveraging post-COVID economic activity data and spatial distribution information of coworking spaces, we employ K-density functions to unveil distinct patterns of coworking space placement and identify concentrations in rural areas. The Bavarian region serves as a unique backdrop for this study, characterized by diverse economic activities and a thriving entrepreneurial ecosystem. The aftermath of the COVID-19 pandemic has reshaped the working landscape, elevating the significance of coworking spaces, particularly for KIBS enterprises. Our findings highlight that rural regions display a more scattered distribution. These results provide valuable insights into the evolving nature of workspace utilization and its implications for regions with a high concentration of KIBS firms in the post-COVID context. This research contributes to the understanding of the spatial dynamics of coworking spaces in rural settings, offering valuable information for policymakers, entrepreneurs, and urban planners aiming to facilitate innovation and entrepreneurship in the KIBS-intensive regions of Bavaria, Germany.

Key words: Coworking, KIBS, Rural, Sustainability

**TOWARDS SUSTAINABILITY OF RURAL COWORKING SPACES.
A SYSTEMATIC LITERATURE REVIEW.**

T02112

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Abstract

Remote working has grown in the last decades thanks to the opportunities that digitalisation provides and the acceleration that COVID-19 pandemic entailed. This has accentuated the need for spaces that provide services and infrastructures that remote workers need to work and do not find outside an office. The creation of coworking spaces (CSs) started in urban settings, explaining why many studies on the topic focus on those territories. However, recently CSs extended towards peripheral and rural areas, attracting academia's attention.

CSs in rural areas are expected to generate positive outcomes in these territories. Nevertheless, all aspects of sustainability must be considered when establishing one and assessing its impacts. Since the knowledge on CSs is mainly based on urban CSs, the current study aims to identify which topics of rural CSs have been investigated and which gaps require further attention from academia.

Conducting a systematic literature review, ten broad thematic lines have been observed and classified into three categories: (I) considerations previous to the establishment of a coworking space: location-reasons, policy and COVID-19 impacts; (II) effects and impacts of the coworking space on the social, economic and political context of the territory: location-impacts, housing, tourism, sustainability and well-being; and (III) dimensions related to the economy and management of the coworking space itself: entrepreneurship and typology of coworking spaces. A need for clear definitions of rural territories and peripheral or suburban areas when studying non-urban CSs is also identified. They represent very different contexts with specific characteristics that can benefit from separate analysis.

This research gathers the current understanding of the impacts of rural CSs on the sustainability of the territories where they locate. It serves as a guide for future research that can assess the role that CSs play in the ecosystems where they are embedded in at a deeper level.

Key words: rural coworking space, sustainability, rural development, local impacts, entrepreneurship, COVID-19.

**MAKERSPACES AND FABLABS IN ISTANBUL: SUPPORTING
LOCAL ENTREPRENEURSHIP AND INNOVATION**

T02156

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Abstract

The 21st century has witnessed the transformation of urban forms as a result of globalization, widespread internet access, and information and communication technology. This has led to the emergence of new working spaces, including makerspaces and fablabs, which are associated with industry 4.0, innovation, entrepreneurship, and creativity. These spaces are found in a variety of locations, ranging from libraries to universities and private-funded spaces, and they encourage making, exploring, networking, sharing, and learning. They also promote innovative production, products, and processes, as well as the acquisition of technical skills and know-how.

This paper focuses on the local impact of makerspaces and fablabs on creativity and innovation in Istanbul, which hosts the largest and most diverse collection of such spaces in Turkey. The study explores the role of these spaces in supporting local entrepreneurship and employment, as well as their potential for hyperlocal production environments in urban areas. It also highlights the investments made by public and private entities in makerspaces and fablabs and their locations in Istanbul's center and periphery.

The research suggests that makerspaces and fablabs have significant potential in terms of local entrepreneurship and employment, as well as for supporting innovation, entrepreneurship ecosystems, and creativity in urban environments. The paper concludes by emphasizing the importance of continued research and investment in these spaces to fully understand their long-term impacts on local economies and cultures.

Key words: makerspace, makerlabs, fablabs, local development, entrepreneurship, innovation

**RESILIENT HUBS: UNVEILING THE DYNAMICS OF UKRAINIAN
COWORKING SPACES AMIDST WAR AND BLACKOUTS**

T02082

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Abstract

This document aims to present the outcomes of a comprehensive research initiative focusing on the resilience and adaptability of coworking spaces in Ukraine during the Russian invasion, particularly amidst the blackout experienced last year.

The primary objective of this paper is to investigate the usage patterns and operational adjustments within coworking spaces in Ukraine. To gather a comprehensive understanding, two surveys were conducted. The first survey, carried out last year after the initial blackout, targeted users of coworking spaces. The purpose was to discern how these spaces assisted individuals in overcoming challenges during the winter blackout.

The second survey, conducted this year, was directed at the coworking spaces themselves. This survey delves into the preparations and strategies implemented by these spaces to navigate potential disruptions anticipated this year. By engaging both users and providers, the research seeks to offer a holistic understanding of the dynamics between coworking spaces and their users during times of crisis.

One significant finding is the importance of users being informed about the availability of resources such as starlinks, bomb shelters, generators, and alternative internet providers at coworking spaces, as these factors play a crucial role in decision-making.

Additionally, the research highlights that coworking spaces tend to foster unity among users, facilitating the sharing of knowledge and contacts. Notably, an online coworking map has been created, providing updated information about each coworking space in Ukraine.

Through collaborative efforts, this research aims to illuminate the adaptive strategies employed by coworking spaces to navigate disruptions, thereby contributing to a broader discourse on the resilience of coworking models in the face of unforeseen challenges.

Keywords: Coworking, Communitarian Workplace, Social Disruption, War.

BOOK OF ABSTRACTS

1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

COLLABORATIVE WORKSPACES IN LARGE CITIES AND SMALLER TOWNS; THE CORAL SURVEY

T02190

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The paper will present the main findings of a survey that was addressed to collaborative workspace’ managers in Europe, where 259 of them responded, between March to June 2023. With Collaborative Workspaces (CWS), we refer to a wide range of spaces that include: Coworking spaces, Makerspaces, Hackerspaces, Fab Labs, Business incubators or Start-up Accelerators, Cultural & Creative Hubs, Co-living spaces, Youth and community centres, artist residencies, and many more.

Such spaces can be quite diverse among each other, with several different functions and types of users. With this paper we want to shed light on the current status of CWS in Europe and especially their geography, as it seems that in the last few years the CWS phenomenon is spread outside big urban agglomerations towards small cities and towns, and in peripheral and remote areas. The analysis will unveil data about the spaces’ demographics, income streams, accessibility, the value of labour, and also that of volunteering labour, and the multiple kinds of events and audiences that are attracted by CWS in large cities and smaller towns and villages.

Keywords: CORAL survey, collaborative workspaces, geography, rural areas, small towns, labour, demographics

Thematic Session:

**“Sustainable Infrastructures
and Constructions”**

BOOK OF ABSTRACTS

1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

SUSTAINABLE SMALL-SCALE HOUSING CONSTRUCTION USING 3D PRINTING: EVALUATION OF BUILDING PROTOTYPES

T02030

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Abstract

3D printing is a rapidly developing technology which has been applied in various areas of industrial production. Large scale concrete 3D printing is a recent sustainable solution, which is affordable, can be applied directly on-site and allows to complete the building construction phase in a short time. By using the building prototypes 3D printing is suitable for small-scale affordable residential construction.

This study is based on the evaluation of six housing prototypes, which are suitable for construction using gantry and crane as the most common types of 3D printer. The height and area of the houses are limited by the working volume of the 3D printer. For each housing typology, the small-scale prototype was printed in order to evaluate its performance in terms of required number of materials, structural stability and construction time.

The results show that the 3D printing time depends on the complexity of the building shape. It allows the construction of straight walls to be completed two times faster in comparison with the traditional way of building. In the case of the domed ceiling, the difference reaches twenty times, since such a complex structure requires careful and pre-sized sitework. When applied to small-scale buildings 3D printing drastically reduces construction time, making it possible to build houses in case of emergencies and natural disasters.

Key words: 3D printing, housing prototype, affordable housing, sustainable construction

**CULTURE AND RESILIENCE: AN INNOVATIVE APPROACH
TO EVALUATE THE CULTURAL RESILIENCE OF THE CITIES
THROUGH INDICATORS**

T02031

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Abstract

The initial idea for this postdoctoral research proposal starts from the concept of connecting resilience with culture, as a new measure of urban development and evaluation. The global effects of climate change such as rising temperatures, rising sea levels and extreme weather events have a major impact on cities and urban life, but also in historic places and monuments, due to their basic construction materials and their different urban planning.

Based on the above, the proposal concerns the connection of resilience, as a new parameter of the evaluation of the tangible and intangible cultural assets of cities, through the creation of a model for assessing the impact of cultural resilience in places. Considering that every city or historical place, traditional settlement the concept of cultural resilience constitutes a new methodology for the evaluation of the cities, most of which are under pressure or crisis of their system (economic, environmental, tourism, etc.).

The creation of a model for evaluating the cultural resilience of cities through the basic concepts and parameters of resilience (innovation, green city, open data, etc.) and culture, ensures their continuity in the future and their transfer from generation to generation. The proposed tool is structured by three initial parameters (resilience, culture, human) and creates a new multicriteria methodological tool, which can be applied in every place.

Key words: cultural resilience, resilience, indicators, tangible and intangible culture

**BOOSTING CONFIDENCE IN CIRCULAR CONSTRUCTION
AND DEMOLITION WASTE MANAGEMENT: A DPSIR
FRAMEWORK ANALYSIS**

T02140

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Abstract

The construction industry ranks among the largest consumers of raw materials, including non-renewable resources and minerals. Within the European Union, over one-third of waste originates from construction and demolition activities, including road planning and maintenance. This waste, comprising a diverse range of materials such as concrete, bricks, wood, glass, and metals, is categorized as Construction and Demolition Waste (CDW). The Waste Framework Directive (2008/98/EC) addresses numerous environmental and sustainability issues arising from CDW mismanagement, including environmental pollution, resource depletion, increased energy consumption, and higher economic costs.

In light of the global shift toward a circular economy, the potential for reusing CDW has gained prominence. Nonetheless, obstacles hinder the integration of recycled CDW into a circular economy framework. A persistent lack of confidence in the quality parameters and reliability of recycled CDW persists, leading to continued landfilling and illegal disposal.

The primary objective of this research is to investigate the underlying causes of this confidence deficit and foster trust among stakeholders and society. The study utilizes the DPSIR framework (Driving forces, Pressures, State, Impact, Response), a causal model that describes interactions between society and the environment. In this research, two driving forces influencing social activities and their environmental impact are examined. Firstly, the need to align with the circular economy framework and support the renovation wave to enhance building sustainability is assessed. Secondly, the societal necessity for urban development and building construction is examined. In both cases, the response involves supporting more sustainable CDW management and its reintegration into construction practices. The DPSIR framework elucidates the CDW generation process, highlights associated pressures, and suggests responses. Importantly, it offers valuable insights to policymakers aiming for a more sustainable and circular built environment.

Key words: Construction and Demolition Waste, DPSIR, Waste Framework Directive, Circular Economy

BOOK OF ABSTRACTS

1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

INNOVATIVE MATERIALS AND METHODS FOR THE DEVELOPMENT OF DECARBONIZED SUSTAINABLE CITIES

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Abstract

The EU's imperative goal to achieve climate neutrality by 2050 demands specific interventions on existing buildings, responsible for around 36% of the total CO₂ emissions. Therefore, it is essential to focus on innovative materials and methods for the decarbonization of the building stock, mitigation of the heat island effect, enhancement of circular renovation processes and the social attractiveness for end-users. This present work presents the above-mentioned processes for the built environment. It presents the cooling performance and energy savings from the use of Passive Radiative Cooling materials. Because of their tailored optical and infrared photonic properties, they can dissipate heat through the infrared transparency window without using any electricity, using outer space as cold and renewable thermal energy sink to reach sub-ambient temperatures even in direct sunlight. The PaRaMetriC project, EURAMET initiative, in which the National Kapodistrian University of Athens is partner, is developing a comprehensive metrological framework, including standardized performance indicators, and testing protocols, to enable comparable evaluation of their cooling performance.

Key words: PRC materials; PaRaMetriC project; sustainable cities.

BOOK OF ABSTRACTS

1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

THE DETERMINANTS OF GREEN BUILDING: AN EMPIRICAL ANALYSIS AMONG EUROPEAN COUNTRIES

T02180

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Abstract

Construction has always been an industry with significant economic, environmental, and societal impacts. Besides providing buildings and facilities, it contributes to national GDP and creates employment opportunities. However, it cannot be foreseen that buildings account for significant ecosystem deterioration. Furthermore, construction activity should follow the 2030 Agenda framework. Green building, which is becoming progressively a global trend, is the construction industry's response to this pressing need, by improving overall efficiency, innovative production and sustainable design, and lowering greenhouse gas emissions. Organizations and institutions related to construction seem to prioritize green building in their procedures. During the last decades, various green building rating systems have been developed globally to evaluate and certify green projects worldwide on a voluntary basis. The common objective of most developed systems is to decrease buildings' environmental impact throughout their life cycles via unbiased procedures, claiming label reliability, strong recognition, market pioneering, and stimulation. LEED (Leadership in Energy and Environmental Design), established by the United States Green Building Council (USGBC), has the most significant market penetration globally. This paper investigates the association of LEED-certified projects in European countries and national GDP, resource management, human capital, innovation, and environmental stringency. Policymakers should mitigate the barriers of sustainably driven practices in the construction field to decrease buildings' environmental footprint, enhance economic prosperity, and meet society's needs for well-being.

Keywords: Sustainable construction, green building, sustainable architecture, LEED.

**DRY STONE WALLING, A TOOL FOR SUSTAINABLE
DEVELOPMENT IN URBAN AND RURAL AREAS**

T02118

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Abstract

Drystone walling capital supported in the past a whole range of community infrastructure, the variety of constructions include retaining walls, terraces, cobblestones, boundaries, huts, processing establishments (mills) and more. Nowadays drystone walling has been recognized as an excellent example of optimizing natural and human resources and an important cultural element, however it is not confined to that.

Due to the technique, the produced infrastructure offers a wide range of advantages for the environment, the biodiversity, the landscape and the development of socioeconomic capital through culture, local jobs and tourism opportunities. These characteristics incorporate all aspects of sustainability and in this context, Drystone walling applies to natural and rural as well as urban and periurban areas.

In this study Drystone walling infrastructure is being assessed by the general public aiming to map perceptions regarding characteristics such as visibility, appeal, biodiversity advocacy, choice of interest etc. Mainly, the goal is to define how informed the general public is about the functions performed by a Drystone construction and what are the attitudes towards the adoption of Dry stone walling in private and public contemporary constructions. The answers are expected to reveal possibilities in the direction of sustainable regional and local development.

Using quantitative research 132 participants' data were analyzed using SPSS so as to detect public perceptions. The results indicated low awareness of the provided services however recognition of drystone walling is a factor that differentiates participant's opinions regarding the importance of drystone in criteria such as Landscape, Use and reuse of natural resources, Biodiversity, Avoidance of environmental pollution among others. Furthermore, dry stone constructions are highly approved in contemporary uses especially in public open spaces.

Key words: Sustainable development, drystone, circular economy, natural resources, infrastructure, public opinion

BOOK OF ABSTRACTS

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Thematic Session:

“Culture and Sustainable Heritage”

GREEN INFRASTRUCTURES FOR ENVIRONMENTAL PROTECTION AND THE SPREAD OF THE CULTURE OF SUSTAINABILITY

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Abstract

Over the last 10 years, attention to environmental and biodiversity protection has increased significantly, both at a national and European level. In particular, the European Union with the Green Deal and the 2030 Biodiversity Strategy has established the principles and targets to be achieved by 2030. These include the protection of the environment in cities and peri-urban areas, also using innovative and socially inclusive technologies.

On the basis of the contents of these important European strategies, the University of Tuscia with the Erasmus+ KA2 *GREENO2 – Green Roofs in higher education institutions as sustainable cEnters for research, participation, ENvironmental consciousness and O2 generation* project aims to encourage the use and formation of green roofs, i.e. a type of roof that involves the planting of vegetation on the covering building, in the main European cities as centers of environmental research and knowledge, study and/or recreational areas and in order to reduce air pollution, promote the absorption of CO₂ and guarantee high levels of air quality.

Higher institutions will be involved in the creation of green infrastructures, with teaching staff and students, to whom scientific knowledge on these infrastructures will be transmitted and who will be as the main actors. In fact, the *GREENO2* project also includes training and information, communication, and dissemination activities, steered at spreading the culture of greenery and environmental protection.

Based on the results of the project, strategy and conception of communication will be proposed to educate youth and develop culture of green infrastructures as well as deepen knowledge on green roof issues.

Key words: green infrastructures, environmental culture, oxygen, communication, youth's education.

IMPLEMENTING THE PROTECTION OF CULTURAL ENVIRONMENT IN THE SCOPE OF APPLICATION OF THE RIGHT TO PERSONALITY

T02068

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Abstract

The intersection of cultural environment protection and the right to personality is a fascinating juncture of public and private interests, touching upon issues of identity, heritage, and individual rights. So far, the delicate balance between safeguarding cultural assets and respecting the right to personality has been ignoring the fact that this right is not only a limit to possible economic exploitation of cultural goods, but also a mean of achieving a deepened protection of cultural environment, namely by making this protection a matter of personal choice.

Cultural environment protection is a collective endeavor aimed at preserving the cultural heritage of a community, encompassing tangible assets like buildings, monuments, and landscapes, as well as intangible ones such as language, traditions, and artistic expressions. It is underpinned by the understanding that cultural heritage is a non-renewable resource with significant historical, social, and aesthetic value. Thus, its preservation is crucial for maintaining the diversity and richness of human cultures, as well as for ensuring the transmission of cultural identity to future generations.

To this extent cultural environment should not be a matter of collective or public interest only; On the contrary, it should be an issue of personal, individual interest of all private individuals. Greek case law has already selectively and to some – not dominant though – way accepted that environmental goods (i.e. both goods of natural and cultural environmental) fulfil the criteria for the exercise of the right accredited to legal subjects in Article 57 of the Greek Civil code. A few of them concern the protection of cultural environment, stating that monuments can in some cases be protected under the scope of application of the aforementioned Article 57 and the right to personality.

Nevertheless, the acknowledgment of this protection as far cultural environment is concerned is rather limited to the cases, where the individuals who apply for legal protection claiming a violation of their right to protection of their personality due to damages caused to cultural environment, are inhabitants of the geographical area where the cultural environmental goods are established. For this reason, this acknowledgement remains rather ineffective. What should be underlined though, is the fact that this ineffectiveness is owe to the way that legal theory and the respective case law insists on adopting, while recognizing the right to personality as encompassing the protection of cultural environment, the same approach it does for recognizing such a function for the protection of natural environment. The paper aims to present the reasons why the protection of cultural environment is capable of being autonomously recognized and accredited to private individual with no geographical or other restrictions, enabling a broader and more effective recognition of protection of cultural goods.

Keywords: Cultural environment, right to personality, human rights, natural environment, case law, geographical restrictions, individual protection of cultural goods.

**VALUE ASSESSMENT THROUGH PARTICIPATORY METHODS
FOR A SUSTAINABLE HERITAGE: THE CASE OF AYAZINI,
AFYONKARAHISAR, TÜRKİYE**

T02096

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Abstract

Rural heritage faces many physical, social, economic and social threats. In order to cope with these threats in a sustainable way, the “historic rural landscape” approach is pointed out by UNESCO. This approach includes understanding, protecting, managing and raising awareness on tangible and intangible heritage with a holistic view of its physical, social, cultural and natural aspects. In this context, understanding the values specific to the place and incorporating the value assessment approach into heritage conservation and management is necessary for sustainable heritage.

Ayazini (Afyonkarahisar, Türkiye) settlement, a component of Mountainous Phrygia, which was admitted to the tentative list of UNESCO in 2015, was selected as a case study. Ayazini settlement is a living rural settlement that dates back to the Phrygian, Hellenistic, Roman and Byzantine periods and has survived to the present day with traces of Turkish structures.

The research focuses on revealing the natural environment, built environment and sociocultural and economic structure values: daily life practices, belief systems, traditions-customs, livelihoods, human needs, etc. In other words, it is aimed to discover values, that is, rituals and routines, both from the past and in daily life.

Participative methods are used in this research which are community mapping workshop with different groups, and interviews on geographic biography with elders and community leaders. Through value assessment, the society-space relationship and the value-space relationship are revealed and the collected data is processed through GIS. Findings enabled the determination of inherent and assigned values, conservation-use values, tangible and intangible values, values related to the cultural route, brand values, tourism values, economic values, and creative industry values. Therefore, this study contributes to heritage conservation and management for sustainable heritage of Ayazini.

Key words: Ayazini, historical rural landscape, participatory methods, sustainable heritage, value assessment.

Note: This study was supported by Kütahya Dumlupınar University with project number 2023 – 30 with the title of “From Rituals and Routines to Routes and Rhythms – Exploring and Designing a Multilayered and Multifaceted Rural Landscape in Community and Space for Sustainable Heritage Branding: Ayazini (Afyonkarahisar)”.

BOOK OF ABSTRACTS

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Thematic Session:

**“Soundscape and Human Movement
in Urban Environment”**

BOOK OF ABSTRACTS

1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

ECHOES OF SUSTAINABILITY: SOUNDSCAPE AND SUSTAINABILITY ASSESSMENT IN A COLLEGE CAMPUS

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1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

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Abstract

Despite the existence of legislation and good practice guidelines, environmental noise remains a challenge for most urban environments. While noise control methods have made significant strides in reducing noise levels in urban sound environments, there has been a notable oversight in addressing its perceptual construct known as the 'soundscape.' This oversight is a missed opportunity for urban sustainable development, aligning with Sustainable Development Goal 11 (SDG 11), which aims to create inclusive, safe, resilient, and sustainable cities and human settlements. Notably, several College and University campuses serve as exemplars of well-designed and environmentally conscious sound environments.

For this research, a soundscape assessment at Perrotis College in Thessaloniki, Greece has been conducted. More specifically, the guidelines outlined in the ISO 12913 series focusing on acoustics and soundscape have been applied. The approach involved a combination of questionnaires, soundwalks, noise level measurements and sound recordings. This approach allowed the combinatory evaluation of soundscape descriptors related to pleasantness and eventfulness with noise and acoustic indicators, over a three-month period.

The results highlighted a seasonal variation in how campus users perceive the soundscape, particularly in terms of its eventfulness. The concept of positive soundscapes and the application of soundscape improvement strategies are crucial elements for enhancing urban environments. These approaches not only contribute to reducing noise pollution but also promote a more pleasant and harmonious auditory experience in our cities and support the creation of more inclusive, safe, and sustainable urban spaces.

Key words: Soundscape, Sound environment, Noise, Sustainability

**SOUND COMPLEXITY AS AN ALTERNATIVE ASSESSMENT
ENDPOINT OF ENVIRONMENTAL NOISE**

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Abstract

The rapid urbanization rate places increased stress on an already burdened built environment. Amongst various challenges, environmental noise emerges as a multifaceted issue impacting the well-being of urban residents and degrading the overall environmental quality. This problem affects receptors in diverse ways, demanding discrete approaches in urban planning and design due to the dual interpretations of noise—both objective and subjective. While noise control methods offer objectivity, the soundscape approach provides a perceptual assessment, benefiting a wide range of receptors. Unfortunately, environmental sustainability concerns are often sidelined.

This research aims to introduce an alternative assessment endpoint, serving as a novel sustainable goal for urban planning and design. Within an Ecological Risk Assessment

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(ERA) framework, assessment endpoints are explicit expressions of environmental values to be protected. The proposed endpoint focuses on the sound complexity levels of urban public spaces susceptible to fluctuations in environmental noise.

To determine the sensitivity of sound complexity to environmental noise, sound level measurements and recordings were conducted along the waterfront of Thessaloniki during pandemic lockdowns (April 2021). The same protocol was repeated post-lockdowns (April 2022) to compare resulting sound complexity levels. The Acoustic Complexity Index (ACI) and Equivalent Continuous Sound Pressure Level (LAeq) served as indicators.

Analysis of collected data revealed a robust inverse relationship between complexity and noise, highlighting an additional impact of noise on the urban sound environment. Assessment endpoints should align with ecological relevance, sensitivity to stressors, and management goals. This study suggests an alternative focal point to be seriously considered by urban sound planners and designers.

Key words: Sound complexity, Environmental noise, Assessment endpoint, land-sea interface, Thessaloniki, Mediterranean cities.

**SOUNDSCAPE AS A DESIGN TOOL FOR OPEN URBAN SPACES:
AN ANALYSIS OF THE WATERFRONT AREA SURROUNDING
THESSALONIKI CONCERT HALL
T02150**

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Abstract

In an age when cities and our planet are challenged by remarkable environmental, healthcare and social crises, open urban spaces are the catalyst for improving the quality of life of urban populations. Open spaces, if designed to be sonically pleasant, can serve as a refuge for recreation and restoration. Sadly, most cities are loaded with a plethora of chaotic sounds that have a negative effect on human wellness. Although sound acts as a “fourth dimension,” which can contribute to how people experience and use space, the contemporary approach of spatial planning is limited to the quantified measuring of noise only. This means that there is a methodological gap in developing a toolbox for creating good soundscapes.

In this paper we investigate how the soundscape functions in correlation to open space and we present a methodology regarding how soundscapes can be used as a design tool in urban planning and the design of public space, in particular. To this end, we present a study performed in the area of Thessaloniki Concert Hall, on the Eastern Thessaloniki waterfront. Our methodology for the soundscape analysis combines two methodological tools: a quantitative measuring of sound levels, conducted in strategic points, and a qualitative empirical analysis, based on the perceived, subjective experience of the soundscape by the user, according to four typology values: Energetic/Lively, Chaotic/Noisy, Indifferent/Dull and Calm/Soft. Using these values, we proceed to visualizing the results by experience/sound/perception mapping, creating a typology raster.

Keywords: open urban spaces, soundscape, urban design, acoustic comfort, noise, waterfront, Thessaloniki Concert Hall.

**KINESTHETIC SPATIOGRAPHY. INTERPRETING
HUMAN MOVEMENT IN URBAN ENVIRONMENTS AND THE
CONTRIBUTION OF DANCE.**

T02065

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Abstract

It is needless to say, that the urban environment is considered the dynamic stage set, where every person's activities, affairs, and all other relevant facets of daily life take place. Each person enters this environment, and in their own individual ways, they roam and interact trying to understand it through movement. This action comes to demonstrate that human movement is a fundamental aspect of urban life, creating a bidirectional relationship between human and surrounding, and as a result, the structure of a city can be remodeled. Thus, it is an exceedingly important criterion to consider in urban design; to examine the dynamic of movement, which can lead to more flexible and anthropocentric spaces. Due to the rapid development of technology and technological advancements, the complexity of human movement through urban environments has been neglected. As a result, it isn't value that is recognized, but rather, the reformations it can induce to the existing structure of a city.

The purpose of this research is the interpretation and comprehension of human movement, giving emphasis on the contribution of dance as an interpretative instrument. A choreographic approach on a large city scale, can reveal the complexity of human interactions in an urban environment, as it focuses on human senses, experiences, and bodily capabilities of each individual. The correlation between space and dance is a strategic approach which recognizes the transformative power of dance, as a tool to comprehend human movement; movement can appear as choreographed, improvised, or completely spontaneous, as it is affected by the layout of the space, individual life experience and the medium through which it is created.

Henceforth, for the purpose of this, there was a full recording of movements which is based on two primary theories-systems: On The Image of the City, by architect and urban planner, Kevin Lynch and on Labanotation, by choreographer and dance theorist, Rudolf Von Laban. These tools aspire to the notation of both space (Lynch) and movement (Laban), which introduce a new perspective relating spatial movement with spatial morphology. They both have a standard subject of analysis which is being reinterpreted and compared, thus enabling complete comprehension of the way in which human movement intertwines with the urban web. In conclusion, the overview of this study, contributes in the deeper understanding of urban morphology, and recognition of the amplitude of human movement, which has the capacity to potentiate public spaces, promote social cohesion and create a structured environment which is aligned with human kinesiology.

Keywords: Urban environment, physical environment, kinesthesia, pedestrian movement, dance, kinesiology, morphology, notation, human scale

BOOK OF ABSTRACTS

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Thematic Session:

**“Urban and Regional Sustainable
Environment”**

**VALUES AND INTERESTS IN THE FOREST-DEPENDENT
COMMUNITIES IN UKRAINIAN CARPATHIAN MOUNTAINS:
BETWEEN SURVIVAL AND SUSTAINABLE GROWTH**

T02078

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Abstract

The ongoing problem of the forest dependent settlements in Ukrainian Carpathian mountains is very slow emerging of ecological values and sustainable growth practices. The explanation is not only weak development of pro-ecological economics, but also historically established practices of leaning on wood and specific social capital, which underpins such practices.

This study is purported to show how ecological values are shaped under the pressure of economic interests and social capital of the local population. Social capital is a key variable here, because it is in the circle of the people with similar experiences or ideas, where the shared values develop. And social capital could be responsible for both: social integration for reforms and development, and for the conservative loyalty for the established practices of leaning on the wood resource.

320 standardized interviews and three focus-group discussions were conducted with local habitants in two highland districts in Ukraine in 2017-2018. It has been found out that the bridging and activist social capital correlate with ecological values, while bonding and passive social capital correlates with individualistic economic interests. On the other hand, individuals with stronger ecological values feel less happy and socially included than people with weak ecological orientations, maybe because of lack of supporting social environment.

Key words: ecological values, forest dependency, social capital.

BOOK OF ABSTRACTS

1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

“WELLCOME TO AIDIPSOS”: A CRITICAL MAPPING WORKSHOP THAT EXPLORES THE FEASIBILITY OF THE CITY’S THERMAL SPRINGS NETWORK SUSTAINABLE DEVELOPMENT

T02135

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Abstract

The paper seeks to present the city of Loutra Aidipsos as a case that exemplifies the research potential of Hellenic thermal destinations, or “Loutrotopoi”, to be examined as multifaceted, networked socio-cultural entities whose value transcends individualistic descriptors (e.g. medicinal value & exploitation capacity). Loutra Aidipsos offer a representative example of this scope of view, as its network of built inventory develops historically in overlay upon a geological topography of thermal resources, that include both spring resources as well as ‘veins’ of thermal water that run through the city in an organized or a spontaneous manner. Given that the current state of the settlement barely echoes the thriving and elegant riviera that existed during the better (first) half of the 20th century, its role diminishing into a largely state-dependent therapeutic destination, this research also offers a case for critical discussion about its potential for sustainable development, that stems from addressing “Loutrotopoi” beyond the biomedical paradigm of hospitalization and towards a more holistic understanding of well-being.

In order to address this problematic, the authors designed an interdisciplinary workshop to be used as a tool of inquiry. Developing on the premises of critical realism, its research methodology uses mapping techniques (deep, thick and multi-layered) in combination with a variety of visualization media (including video, architecture, photography, diagrams, maps) and diverse criteria and resources (ranging from architectural, aesthetic, landscape, social and cultural, to folklore and personal testimonies) to challenge dominant perceptions and reveal the potential for a structured, yet broader, contextual approach.

Key words: sustainability, thermalism, critical realism, mapping, Aidipsos

Acknowledgements: “LOUTROTOPOS: Critical mapping and visual narration of thermal springs in the Hellenic Territory”. Host Institution: University of West Attica. Research coordinators: Georgia Touliatou, Efrossyni Tsakiri, Efrossyni Mouzakitou. The research is supported by the Hellenic Foundation for Research and Innovation (H.F.R.I.) under the Sub-action 1 “funding of new researchers” of the “Basic Research Financing Action (Horizontal support of all Sciences) of the National recovery and resilience plan.

REINVENTING LOUTRA AIDIPSOS: STRATEGIES AND CONCEPTS FOR A HOLISTIC SUSTAINABLE DEVELOPMENT OF THERMAL SETTLEMENTS

T02166

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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), students are asked to create an urban planning and design proposal for a settlement of up to 3,000 inhabitants. They are asked to map the settlement using quantitative and qualitative methods and then redesign it. For the academic year 2023-2024, Loutra Edipsou in Evia was chosen as a case study.

The distinct characteristics of the settlement arise from its inseparable relationship with the culture of thermalism, which has largely shaped the modern identity of the place and is reflected in various aspects, social, economic, cultural, architectural, ecological and other. The influence of thermalism as a natural resource is evident in the choice of location, population mix, prevailing land uses, the aesthetics and morphology of public spaces and buildings, their energy footprint, etc. Key problems emerging today are, the vast abandonment of the, formerly thriving, thermalism infrastructure. Adding the widely unequal population increase during summer months due to seasonal tourism, it becomes clear that Loutra Aidipsou are in urgent need of an urban planning intervention.

In the student project, the current challenges will be critically discussed, the existing strategies will be evaluated and ideas will be sought for a new management of the thermal resources. The aim is to propose a more sustainable model for Thermal settlements that will address the existing issues with particular emphasis on the energy footprint and propose a multi-stakeholder inclusion model that will change the existing relationship between public and private exploitation of thermal baths.

Key words: sustainability, thermalism, Aidipsos, urban planning, urban design

Acknowledgements: Maria Vrasida and Efrossyni Tsakiri are course moderators and supervisors for this course. The scope of the project is part of the wider research project “LOUTROTOPOS: Critical mapping and visual narration of thermal springs in the Hellenic Territory”. Host Institution: University of West Attica. Research coordinators: Georgia Touliaou, Efrossyni Tsakiri, Efrossyni Mouzakitou. The research is supported by the Hellenic Foundation for Research and Innovation (H.F.R.I.) under the Sub-action 1 “funding of new researchers” of the “Basic Research Financing Action (Horizontal support of all Sciences) of the National recovery and resilience plan.

NICE’S GREEN OASIS: ANALYZING SUSTAINABLE URBAN TRANSFORMATIONS THROUGH AN EXAMINATION OF THE PROMENADE DU PAILLON PROJECT

T02109

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Abstract

Green public spaces are integral to urban environments, playing a crucial role in advancing sustainability goals. These spaces extend beyond mere aesthetics, contributing significantly to environmental conservation, biodiversity, and mitigating urban heat island effects. This study centers on the Promenade du Paillon project in Nice, France, as a case study to unravel the profound significance of green urban spaces in achieving diverse objectives within sustainable development.

A mixed-methods approach is employed to comprehensively analyze the sustainable implications of the Promenade du Paillon and its forthcoming expansion. In-depth discussions with city officials and planners provide valuable insights into the collaborative planning processes, while a survey gauges local sentiments, offering a nuanced understanding of community perspectives on the project.

Through an examination of economic impacts, environmental benefits, cultural enrichment, and social inclusivity, this research critically evaluates the project's efficacy as a green public space. Preliminary findings highlight the potential of the Promenade du Paillon to serve as a model for sustainable urban development, transcending its immediate context to offer valuable insights for future green space initiatives and sustainable solutions for cities.

Keywords: Promenade du Paillon, Public Green Urban Spaces, Sustainable Development, Urban Planning, Nice, France

**A PARADIGM SHIFT IN REAL ESTATE DYNAMICS: UNRAVELING
THE BLUEPRINT FOR URBAN WELL-BEING**

T02167

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Abstract

This comprehensive study embarks on an exploration of the intricate relationship between sustainable development, real estate dynamics, and the overarching goal of ensuring urban well-being. At its core, the research delves into the transformative paradigm shift occurring within real estate practices, with a spotlight on the profound implications for creating healthier and more sustainable cities. The investigation begins by dissecting the intersection between Sustainable Development Goal 3 (Good Health and Well-being) and modern office building design. The narrative unfolds with a meticulous analysis of a prime exemplar, "The Edge" in Amsterdam, providing a detailed case study to decipher how sustainable architecture contributes to the global mission of fostering healthy lives and overall well-being by 2030. The focus extends beyond the architectural aesthetics of "The Edge" to scrutinize its design features, construction methodology, and the seamless integration of cutting-edge technologies. A central element of this exploration is the emphasis on the Building Research Establishment Environmental Assessment Method (BREEAM) sustainability rating system, which plays a pivotal role in establishing the green credentials of such groundbreaking structures. The study unearths noteworthy findings that position "The Edge" as a veritable pinnacle of green architecture, attaining a remarkable BREEAM score of 98.4%. The innovative features of "The Edge" include a sophisticated geothermal system, expansive solar panels, and the incorporation of advanced technologies such as Building Information Modelling (BIM) and Internet of Things (IoT). These elements, collectively, hold significant implications for real estate practices. The study underscores the profound connection between sustainable building practices and their potential impact on crucial aspects of real estate, including property value, tenant attractiveness, and operational efficiency. As the world grapples with unprecedented health challenges, this research serves as a clarion call for the critical role of innovative and sustainable office designs. Notably, it highlights how these designs not only support the attainment of Goal 3 but also wield a transformative influence on broader real estate dynamics. The findings assert that the incorporation of green and health-centric features within buildings is not merely an environmental consideration; rather, it enhances the overall value and desirability of real estate assets. In the pursuit of a sustainable future, this study offers a compelling argument for the need to integrate health considerations seamlessly into real estate strategies. The built environment emerges as a potent force, playing a pivotal role in shaping healthier, more resilient, and ultimately more livable communities. Thus, this research serves as a roadmap for real estate professionals, architects, and policymakers alike, illuminating the path towards a future where well-being is not just a goal but an intrinsic quality woven into the fabric of urban living.

Key words: sustainability, health city science, built environment, real estate, design theory, user experience, urban wellbeing, SDGs

**URBAN METABOLISM CONSIDERING
THE “15-MINUTE CITY” CONCEPT**

T02172

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Abstract

The global population is experiencing rapid growth, leading to various economic, environmental, and social implications such as congested roads, increased traffic demands, and longer travel times for essential services. Projections indicate that over two-thirds of the world's population will reside in urban areas by 2050. The concept of the 15-minute city advocates for urban environments where daily destinations are easily accessible by a short walk or bicycle ride. This not only diminishes the environmental impact of transportation but also brings about positive effects on individual mental and physical health, as well as social connections.

The 15-minute city represents a straightforward, flexible, and widely embraced perspective on urban living that has gained traction globally. Services like public schools, green spaces, libraries, supermarkets, department stores, employment centers, basic healthcare, and entertainment venues are envisioned to be within a 15-20 minute reach in these cities. The objective is to create vibrant and livable communities that stimulate the economy, foster social cohesion, promote sustainable development, and enhance the overall health and well-being of residents.

This study focuses on identifying the main opportunities and challenges associated with implementing the 15-minute city concept in urban planning. The aim is to reduce energy consumption and air emissions, contributing to climate change mitigation while establishing dynamic and sustainable urban landscapes.

Key words: urban metabolism, urban planning, 15minute city, sustainable development

Thematic Session:

**“Education, Employment and
Entrepreneurship”**

**SUSTAINABLE DEVELOPMENT AND LABOUR MARKET IN THE
REGION OF CRETE: A MIXED METHODS APPROACH FOR
UNDERSTANDING THE FACTORS ASSOCIATED WITH
EMPLOYMENT AND INCOME PRECARITY**

T02122

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Abstract

The present research aims to unravel the characteristics of various employment groups, emphasizing the issue of precarious employment, its association with income precarity and subsequently the labor force precarity in Crete, Greece. The methodology followed is based on mixed methods, with the qualitative survey identifying different labor force groups experiencing employment precarity and the quantitative survey econometrically identifying the labor force characteristics contributing to income precarity. The qualitative survey encompasses different labor force groups and sheds light on the employment precarity of youngsters, unemployed, seasonally and temporary employed and migrants. Within the labor force, employment precarity is delineated by working conditions, employee rights, employer demands on flexibility, and the overall degradation of income security. Additionally, a logistic regression model is used to identify the factors that affect the probability of the labor force in Crete being in income precarity conditions. Findings indicate that seasonally employed and those partially employed or unemployed exhibit a higher probability of facing income insecurity. Further, the qualitative findings show that young adults that are employed primarily in seasonal jobs, whereas in many cases, are for low-skilled personnel and consequently are more susceptible to employment risk and insecurity. On the other hand, the older labor force, aged over 55, demonstrates a higher probability of income precarity compared to the their younger cohorts. Higher education indeed reduces the probability of being in economic precarity, while the personnel employed in the primary and secondary sector are more likely to be in an income precarious condition. Additionally, our empirical results indicate that people in state-subsidized employment are more likely to be in a precarious income state. Policy responses during the economic crises to retain employability and sustained economic growth are essential, yet again, combating precariousness and vulnerability is also significant for building economic resilience and providing a foundation for long-term economic growth and sustainable development.

Key Words: Labour Market, Sustainable Development, Precarious Employment, Income Precarity, social vulnerability, logistic regression model

**A COMPREHENSIVE LITERATURE REVIEW OF MULTICRITERIA
DECISION-MAKING (MCDM) TECHNIQUES, WITH A FOCUS ON
THE ANALYTIC HIERARCHY PROCESS (AHP)**

T02142

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Abstract

Universities worldwide are increasingly adopting the Sustainable Development Goals (SDGs) framework, emphasizing environmental, economic, and social sustainability. This adoption of the SDGs benefits universities in numerous ways, including increased effectiveness, measurement of demand for SDG-related education, development of new partnerships and tapping into new funding opportunities. Furthermore, it allows universities to define what it means to be a globally conscious institution and responsible contributor to sustainable development. The intricate nature of sustainable development necessitates a structured decision-making process, reflecting universities' commitment to global initiatives, recognition of sustainability's interconnected nature, and responsiveness to stakeholders' expectations. Employing various multi-criteria decision-making (MCDM) techniques, notably the Analytic Hierarchy Process (AHP), has become pivotal in supporting decision-making in environmental research.

This article presents a systematic literature review examining the application of MCDM techniques, specifically focusing on AHP, in decision-making for sustainable development within tertiary education. The review entails a comprehensive analysis of academic literature, including descriptive analysis, mental mapping, bibliometric data, categorization and in-depth analyses of highly cited and recently cited literature, along with the clustering of research evolution.

The findings offer a thorough understanding of the state-of-the-art applications of MCDM in tertiary education for sustainable development. By identifying gaps in existing research, the review not only highlights areas requiring further exploration but also proposes avenues for future research at the intersection of MCDM, AHP, and sustainable development in tertiary education. The implications extend to both research and practice, providing valuable insights for decision-makers in academic institutions navigating the complex landscape of sustainable development. This review serves as a valuable resource for scholars, practitioners, and policymakers interested in advancing sustainable practices within the realm of tertiary education.

Key words: SDGs, Multicriteria Decision-Making (MCDM), Analytic Hierarchy Process (AHP), literature review

EXPLORING PROFESIONALISATION ASPECTS OF INNOVATIVE PARTICIPATORY LOCAL DEVELOPMENT THROUGH QUALITATIVE RESEARCH

T02165

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Abstract

Global challenges from the COVID-19 outburst to the need for climate change adaptation, emerge national, regional and local authorities for twin (digital and green) transition around the EU. To meet this need they need to activate fruitful multi-stakeholder dialogue and cooperation and co-design innovative development paths, fully coherent with local context specificities but also with common EU-level strategic development. Although stakeholders' engagement in such endeavours is not a new approach, a significant gap the required knowledge and skills on how it is realised in practice is already evident among professionals engaged in participatory planning.

By realising this gap, the PROMEnhance project by using several participatory research methods, aims at stressing the necessity and opportunity of exploring, analysing and structuring the emerging professional area that refers to innovation-oriented participatory local development, and proposing a reference and a learning community to support the initial training and continuing professional development of qualified professionals. In fact, this paper focuses on the results obtained through the multi-case study analysis conducted, followed by a set of case study representatives' interviews in 5 EU countries. Participatory practices reveal commonalities and differences among multiple participatory practices used giving an emphasis on professionals' profiles able to drive their successful implementation.

This qualitative research maps existing practices, barriers and threats to successful implementation of participatory practices on innovative local sustainable development exercises; leading to framing key concerns and aspects of an integrated competence frameworks in reference to those professionals willing to incorporate inclusive and participatory aspects to their current professional action.

Key words: Participatory planning, education and training, multi-case study analysis, local innovative and sustainable development, participatory research.

**THE PROMOTION OF SUSTAINABILITY THROUGH
THE INCLUSION AND TRAINING PROCESS**

T02110

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A sustainable society includes the provision of the best conditions for human living, aligned with the efficient handling of environmental problems. Therefore, socioeconomic and environmental sensitivity are the cornerstones of sustainable development. Megacities are constantly increasing in population and numbers, and the needs of their citizens for accessible transportation, communication, employment, health systems, and organised public and private spaces are imperative.

In addition, the rapid growth of the population leads to higher consumption of products and wastes that pollute the environment and all-natural sources. In those megacities, ‘vulnerable persons’ and minorities such as people with disabilities (estimated to 15% of the total) constitute a considerably growing part of the population, having specific needs, and requiring assistance and tailor-made services to assimilate and achieve inclusion, participation, and equality with other citizens within a sustainable society. Therefore, satisfying these needs is an important issue for society’s cohesion and sustainability. The young designers’ training emphasises inclusive planning by highlighting the needs of people belonging to minorities, such as those with disabilities is an important action.

In this study, examples of students’ works on the design of interiors, public spaces, and objects regarding the needs of people with disabilities are presented. By learning to design for All, considering the needs of minorities, the last will respond with respect to other citizens, society, and the environment, and this leads to high sustainability. Policymakers, practitioners, and academicians could benefit from the current study by acquiring some significant insights that facilitate the harmonised operation of a sustainable society.

Key words: Inclusion; accessibility; equal opportunities; megacities; education; minorities; people with disabilities

PROMOTING THE 17 GLOBAL SUSTAINABLE DEVELOPMENT GOALS THROUGH PRIMARY EDUCATION

T02041

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Abstract

Going through the 21st century, with the rapid development of technology and artificial intelligence, man has achieved incredible achievements that were previously "imagined" as utopian. To serve his needs, his bliss and his safety, he has incorporated the use of technology into his daily life. However, while the quality of human life improves with various services, the degradation of the environment is a reality. Global environmental problems have taken on enormous dimensions and actions are required both locally and globally to promote Sustainable Development. However, the actions presuppose the education of people, which is necessary to start from the first stages of children's lives. In this early school age, during which awareness is "built" on the principles of Sustainable Development, the foundation stone is laid so that their future is sustainable, based on the saying that "children are the future". The subject of the work is the promotion of the 17 Global Goals that should be implemented from 2015 to 2030, which were established by the United Nations and concern future international development.

Knowing that the pillars of Sustainable Development are the Economy, the Environment, Society and Culture, with the necessary interaction and interconnection between them for the well-being of generations, the need for continuous development and progress thanks to the spiritual evolution of man and the rapid development of technology. In this specific paper, the gap observed in the scientific community will be studied, specifically, in the correlation of Sustainable Development with Primary Education, as the incomplete or minimal reference to the existing school material does not help in the promotion and learning of knowledge among young students, the who in a few years will be the citizens of society and the professionals in key sectors.

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 work hypotheses.

Keywords: Global Goals, Primary Education, Sustainable Development

EVALUATION OF THE STATE OF KNOWLEDGE AND ATTITUDES OF SECONDARY SCHOOL TEACHERS IN THE ENVIRONMENTAL EDUCATION (EE) AND EDUCATION FOR SUSTAINABLE DEVELOPMENT (ESD) PROGRAMS

T02154

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Abstract

In recent years, the scientific community has documented the necessity of connecting Environmental Education and Education on Sustainable Development in the secondary school environment. The research on the teachers' state of knowledge, attitude and perception regarding Environmental Education and Education of Sustainable Development, along with the evaluation of the programs implemented in secondary schools are the key components both in designing and implementing the Programs that aim to improve education, information and awareness on environmental issues. The purpose of this research is to bring out, on the one hand, the problems of the educational process regarding the Environmental Education and Education on Sustainable Development and on the other hand, to promote and educate environmentally responsible citizens who will actively protect the planet.

The research is conducted with the method of questionnaires that have been sent to teaching staff all over the Greek state, collecting a sample (>500 questionnaires) from all areas of the country. The questionnaire includes questions of closed and open type (opinions). The present research is a preparatory part of a doctorate thesis and the first analytical results of the questionnaires will be presented. The results will be processed with the use of the program of statistics IBM-SPSS Statistics25. We hope the results of this research will contribute to the adequate education of the young people on the EE/ESD and the updating on the sustainable education and on the designing of programs that will fill the gap of knowledge that the international bibliography records. An important finding is the recording of the necessity of educating the teaching staff on issues related to EE/ESD.

Key words: Environmental Education, Education for Sustainable Development, Awareness Programs

Pre-organised Special Session:

“Contribution of Forest and Natural Environment to climate actions for Sustainable development”

Part 1. Mitigation to climate changes

Organised by Prof Kalliopi Radoglou

**ABOVE AND BELOW GROUND BIOMASS ESTIMATION
OF EVERGREEN FORMATIONS**

T02081

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Abstract

Forest ecosystems absorb CO₂ from the atmosphere and store carbon in their biomass through photosynthesis. Greece has substantial areas dominated by evergreen broad-leaved forests, but to date, there are no accurate methodologies or high-precision data available for estimating their biomass and carbon stocks. This makes it difficult to support the national forest inventory for more precise estimation of CO₂ sequestration and emissions under the UNFCCC. The LULUCF sector will play a crucial role in preventing global temperature increase during the period 2021 to 2030.

The aim of this study is to contribute to the improvement of the accuracy in estimating the biomass of evergreen broad-leaved forests by calibrating an allometric biomass model in the area under the jurisdiction of the Forest Service of Xanthi, Greece. This effort will support the national inventory to increase the accuracy of the LULUCF calculations at the T2-T3 level.

In the study area, 40 sample plots were randomly established where shrubs height measurements and ground cover were taken. Out of the 40 sample plots, 25 were subjected to a 4 square meters area clear cut harvesting. Fresh weight measurements and sample collection for laboratory drying were carried out. This material formed the database for the calibration of the allometric equation.

The fitting of the allometric model resulted in total aboveground biomass of 469,807t in the total area of evergreen broadleaves which covers 4,961 ha, corresponding to 234,903t of pure carbon (IPCC biomass carbon content default value=0.5). The below ground biomass is estimated to be 1.84 times the above ground biomass resulting in another 863,035t of biomass and 431,517t carbon respectively. The total amount of carbon expressed in terms of CO₂ equivalent amounts to 2,443,543t or 2.44 Tg of sequestered CO₂ in the evergreen broadleaved formations at the region of Xanthi Forest service.

Key words: allometric equation, aboveground biomass, climate change, sings, emissions, LULUCF

**ALLOMETRY, BIOMASS AND PRODUCTIVITY OF DECIDUOUS
OAK FORESTS IN XANTHI (NORTHERN GREECE)**

T02187

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Abstract

For Oaks, a Green Fund-supported project, examines the dynamic assessment of CO₂ sequestration in deciduous oak forests and evergreen broadleaved forests as a way to enhance the National Greenhouse Gas Inventory in Greece. In this framework, the biomass allometry and productivity of deciduous oak forests in Xanthi (Northern Greece) were studied.

In this work, data from the management studies conducted by the Xanthi Forestry Service were used. From the oak management class, the diameter distributions (numbers of trees over diameter at breast height) and the wood stock amounts were analyzed.

To estimate the aboveground biomass, two methods were applied: (a) existing allometric biomass models for the species *Quercus frainetto* in Greece, and (b) a Biomass Expansion Factors (BEFs) for the same species to convert wood stock into biomass.

The comparison of methods (a) and (b) showed that the BEF used to convert volume to mass should have a value close to the upper limit of the factor's range, which is appropriate for young stands, in order to get a fair estimate of the biomass. The fact that the input data is derived from stands with an average diameter generally below 45 cm, which is the mature diameter for harvesting, further suggests that the stands are young and have a high net productivity. The estimated biomass indicates that the stands are in the early stages of growth and have a strong potential for future yield.

Key words: Allometry, biomass, deciduous oak forests, productivity

**CARBON SEQUESTRATION IN A NATURAL COASTAL ALEPPO
PINE FOREST**

T02083

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Abstract

Anthropogenic emissions enhance atmospheric CO₂ levels, influencing the frequency of climate change extremes occurrence. Forests play a vital role by sequestering atmospheric CO₂ and storing it as biomass. However, uncertainties persist regarding the ability of natural forest ecosystems, especially in the Mediterranean region, to endure the diverse challenges posed by climate variability. This study aims to (a) quantify the carbon stocks (above-, and below-ground biomass of both the tree overstorey and the shrub understory, forest floor, deadwood, soil organic carbon) and fluxes (annual litterfall and fine root production) of a natural, near-coastal Aleppo pine ecosystem in Chalkidiki, Greece being a part of national and European Long-Term Ecological Research network (LTER) and (b) assess the effect of age on total ecosystem carbon sequestration, as tree age at the site ranges from 30 to 110 years. To date, we lack information of the carbon pools of natural pine ecosystems in Greece, particularly in regard to their understory shrub layer. For this purpose, 15 sampling plots of 0.1 ha are established, taking into account their spatial distribution and tree and understory density. The diameter at breast height (DBH) and tree height were measured at all trees, while understory vegetation coverage and mean height were determined to apply allometric models for tree biomass estimation. From each plot, litterfall and forest floor samples were collected seasonally, while fine roots and soil samples were collected once during the year. In-growth cores were also established for assessing fine root production. Finally, the carbon content of plant tissues was determined by elemental analysis. The effect of tree age and understory density is discussed and the carbon equivalents stored by this ecosystem are presented to determine the ecosystem's contribution to the carbon footprint of the region.

Key words: Climate change mitigation, Mediterranean region, Aleppo pine ecosystems, carbon sequestration, carbon equivalents

**LONG-TERM MONITORING OF CARBON FLUXES AND
PHENOLOGICAL SHIFTS IN A POST-MINING FOREST
PLANTATION**

T02086

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Abstract

The establishment of forest plantations for the reclamation and improvement of disturbed sites, such as those of former lignite mines, is a very common practice worldwide. Black locust (*Robinia pseudoacacia* L.) is a species that has been commonly used in relevant projects, because of its durability and capability to cope with the harsh environmental conditions. However, the information about its seasonal performance, mass and energy fluxes and phenology is quite limited so far.

In this study, we present the seasonal carbon flux dynamics, in terms of GPP fluctuation, and the phenological shifts for a mature black locust plantation, located in the restored areas of the Lignite Center of Western Macedonia, Greece. For the needs of the study, an eddy flux tower has been established and continuous measurements were taken for the period 2019 – 2023. The carbon flux phenology was defined in terms of start and end of growing season, as well as the period of the peak activity. The GPP response to environmental parameters during the growing season was assessed with the use of Generalized Additive Models (GAMs). Finally, with the use of a phenological camera (PhenoCam), we assessed the contribution of the forest understory to the overall annual carbon budget.

According to our results, the peak of the seasonal activity for the site is met during the beginning of June, however there are significant interannual differences in carbon fluxes inside the growing period. The contribution of the forest grass understory to the overall annual carbon budget is quite high, however there are also significant interannual differences throughout the years. The environmental variables that have the highest impact on water stress effects is the Vapor Pressure Deficit (VPD) for black locust and soil water content (SWC) for the understory grass..

Key words: Ecosystem Carbon Budget, Gross Primary Productivity, Forest Plantations, Climate Change Mitigation

SIMULATING THE CARBON POOLS OF MEDITERRANEAN PINE FORESTS UNDER DIFFERENT CLIMATE CHANGE SCENARIOS

T02131

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Abstract

Forest ecosystems provide a range of ecosystem services including Carbon (C) recycling and storage. However, under shifting climate conditions and disturbance regimes there are concerns that the ability of forest to act as C sinks might fade away. These concerns are of particular significance for lowland Mediterranean Pine forests, where increased temperature and reduced precipitation are projected to enhance drought stress and fire occurrence.

In this study we present the application and validation of a process-based forest model, parameterised with biometric and C-flux monitoring data in Mediterranean *Pinus brutia* forest stands found along a post-fire and an elevation gradient. These gradients mimic the effect of different stand structure and micro-environmental temperature variation on the overall forest productivity and carbon recycling. After evaluating our model performance, we upscaled its implementation over the entire Pine forest ecosystem on the island of Lesbos, Greece under different climate scenarios and reference periods. In particular, we simulated the gross primary productivity (GPP), the net primary productivity (NPP) and the net ecosystem productivity (NEP) during a baseline period (2000-2020), a mid-term period (2040-2060) and a long-term period (2080-2100) following the IPCCs RCP 4.5 and RCP8.5 emission scenarios.

Our simulations suggest that stand structure variation, expressed through changes in the leaf area index (LAI) of the stands, have a stronger effect than microenvironmental temperature variation, at least at the spatial scale of our study. In all cases our simulations suggests that forest stands retain their ability to store C, with the exception of the extreme RCP 8.5 scenario where a strong decline in NEP was simulated.

Key words: Forests, carbon sink, photosynthesis, soil respiration, *Pinus brutia*

Funding: The project entitled “Projecting the impacts of climate change on forest ecosystems in Greece - An integrated forest vulnerability and mitigation framework”, with a total budget of 199,174.5 € is implemented by the University of the Aegean and funded by the Green Fund, Funding Programme: ‘Natural Environment and Innovative Actions 2023’. Priority Axis 3: ‘Research and Implementation’.

**ROOT SYMBIOTIC RELATIONSHIPS ENHANCE C STORAGE IN
ROBINIA PSEUDOACACIA RESTORATION PLANTATIONS**

T02066

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Abstract

Robinia pseudoacacia L. is extensively planted for restoring post-mining waste depositions at the lignite complex of Public Power Corporation at NW-Greece. Given the species' nitrogen-fixing ability, we firstly aimed at analysing bacterial community composition and identifying the different types of symbioses developed between the plant root and soil microbes. Nodulated and non-nodulated seedlings were then grown at waste depositions' material in growth chambers and half of them were subjected to photosynthetic tissues' harvest to simulate severe carbon starvation. The microbiome structure and distribution in two distinct-sized nodules formed on the *R. pseudoacacia* roots, was assessed by a ribosomal metagenomic strategy, sequencing a specific bacterial region of 16S rDNA. Gas exchange measurements and ¹³CO₂-labeling were performed to assess the effect of the root-soil microbes' symbioses on the carbon balance of *R. pseudoacacia*.

Operational Taxonomic Unit analyses showed that the microbiome of larger, indeterminate nodules harbored mainly *Mesorhizobium* (>70% of the microbial population), but also diverse bacteria taxa (*Flavobacterium*, *Streptomyces*, *Rastolnia* and *Aeromonas*) which were less prevalent in small nodules. On the other hand, several core genera including *Pseudomonas*, *Allorhizobium-Neorhizobium-Pararhizobium-Rhizobium*, and *Variovorax* were more abundant in smaller nodules. Independent of the microbiome composition, nodulated plants exhibited higher photosynthesis, stomatal conductance and transpiration than C plants, and all parameters further increased following resprouting of photosynthetic tissues. The two types of nodules had similar ¹³C-labeling efficiency and in combination resulted to higher ¹³C abundance in the leaves, compared to non-nodulated plants. The positive effect of nodules in C allocation was more pronounced in resprouting tissues after harvest, indicating that both types of nodules enhance the plants' C-budget under C starvation. Overall, the symbioses between *R.pseudoacacia* roots and soil microbes enhances its carbon balance at the unfavourable post-mining conditions. An in-depth analysis of microbiome biochemistry could further improve our understanding of differential symbiotic performances.

Key words: black locust, gas exchange, carbon allocation, plant-soil microbial symbioses.

EFFECTS OF CLIMATE CHANGE ON THE ORGANIC CARBON IN FOREST SOILS

T02186

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Abstract

Forest soils constitute an important sink of carbon. Approximately half the quantity of carbon in land is stored in forests (1146×10^{15} g) and from this quantity, two thirds are stored in soils.

The carbon stocks in soils vary. In general, they are high in cold climates and they become lower in hot and moist environments. In the forests of cold regions, the stock of stored carbon can reach the 80% of the total stock of carbon in plants and soils, whereas in tropical forests it reaches 50%. In temperate regions, the carbon in soils is about 60% of the total.

The climate change affects forest soils through changes in carbon dynamics

More specifically, increased concentrations of CO₂ affect photosynthetic products reaching the soil profile. At the same time, increased soil temperatures affect the microbiological soil respiration.

The increase of CO₂ concentration in the atmosphere will cause an increase of the photosynthetic rate and in turn an increase in plant biomass, litterfall mass and consequently in soil organic matter. However, the stock of the stored organic C depends on the activity of microorganisms responsible for decomposition.

Most experiments have shown that an increase in CO₂ will be followed by an increase of thin roots and the rate of infection with mycorrhiza. Therefore, changes in soils depend on the processes in the rhizosphere.

The increase in temperature accelerates the decomposition rate of the soil organic matter but the rate depends on the soil type. If the chemical composition of the organic matter is resistant to decomposition, the loss of carbon will not be large.

In contrast, soils in cold climates have large quantities of easily decomposable organic matter and they will become a source of CO₂.

The effects of Land Use change and afforestation are discussed.#

Keywords: Forest, Soil, Climate, Organic Carbon, Decomposition, Photosynthesis, Rhizosphere

SOIL RESPIRATION IN MEDITERRANEAN OAK-DOMINATED ECOSYSTEMS IN GREECE

T02077

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Abstract

Due to rising atmospheric CO₂ concentration and its positive warming potential, studies on soil respiration or soil CO₂ efflux, have received a lot of interest recently. The present paper investigates how soil respiration changes seasonally and how seasonality and environmental inputs affect the carbon cycle in two representative oak-dominated Mediterranean forest ecosystems, deciduous oaks and evergreen shrubs, in Xanthi, northern Greece. The purpose of this research is to: i) estimate soil respiration in the two types of ecosystems and examine the difference among them, and ii) identify the seasonal fluctuation of soil respiration, and understand how it is affected by climatic parameters, such as soil temperature and humidity and other inputs like forest litter. To this end we assess the contribution of two distinct processes that generate soil CO₂ efflux: i) root-derived C breakdown (autotrophic respiration of roots) and ii) soil-derived C decomposition (heterotrophic respiration of litter and soil organic matter). For this purpose, three treatments were applied: control (undisturbed), no-litterfall (aboveground litterfall removed), and no-litterfall -no-roots (both litterfall and roots were removed). Roots were eliminated in the last treatment by digging 20-25 cm deep holes (20 cm wide) and covering them with geotextile to restrict root access.

In each of the two ecosystem types, three monitoring plots were established, each including three replicate measuring points for each of the three treatments. Polyvinyl chloride (PVC) collars were put at each measuring point, thus 54 in total. Using a Li-8100 automated soil CO₂ efflux system, soil respiration measurements are conducted once every three months for one year. Additionally, 3 litterfall traps were established in each monitoring plot and litter (litterfall and forest floor) are sampled every three months.

Our preliminary results indicate that evergreen shrubs have higher soil CO₂ efflux than deciduous oaks and that soil moisture and temperature affect the soil respiration in both ecosystems.

Key words: soil respiration, evergreen, deciduous oaks, litter, climate.

**MODELLING SOIL ORGANIC CARBON STOCKS
IN FOREST SOILS**

T02089

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Abstract

Forest ecosystems store large amounts of carbon, in aboveground, belowground biomass, dead organic matter, and in the soil, through primary production. Climate change affects plant photosynthesis as well as soil carbon mineralization creating uncertainties about the forest carbon budgets. Especially in the context of climate change, terrestrial carbon stocks and their changes need to be measured and monitored. European Union members are required to register greenhouse gas emissions from the land use, land use change and forestry sector (LULUCF), starting with tier 1, and then transitioning to higher tiers. The present work investigated changes in soil organic carbon stocks in forest soils.

Carbon turnover model RothC was used to model soil organic carbon stocks in forest soils in Xanthi regional unit, Northeastern Greece. The effects of soil type, soil cover, plant cover and climate on carbon turnover are included in the model. It has a monthly time step and is a decomposition model, it does not include a plant growth model. Sampling in the field was conducted and soils were analyzed in the lab. Soil organic carbon, bulk density, soil texture and soil nutrients were measured. Soils were assumed to be in equilibrium for modelling. The model was initialized with a spin up phase and then run in forward mode for 20 years. A climate model was used to simulate the effects of climate change. To assess measured versus modelled values, root mean square error, mean absolute error and modelling efficiency were calculated. Two different datasets, from different points in time were used (soil data from 1995 and 2023). Then, spatiotemporal soil organic sequestration potential was calculated.

Key words: forest, soil organic carbon stock, RothC, carbon modelling

Pre-organised Special Session:

“Contribution of Forest and Natural Environment to climate actions for Sustainable development”

Part 2. Adaptation to climate change

Organised by Prof Kalliopi Radoglou

**FOREST MANAGEMENT STRATEGIES FOR ADAPTATION
TO CLIMATE CHANGE**

T02191

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Abstract

Forest ecosystems are facing global challenges due to adverse climatic effects. In this presentation we discuss three strategies for managing Mediterranean forest ecosystems. Strategy 1: Resistance.

Managing forest ecosystems in such a way that they can resist and respond better to the undesirable outcomes of climate change. This strategy can be adopted at two levels: either passive or active. The active strategy includes a set of management measures aimed at preventing a new ecosystem from replacing the current one, through, for example, targeted regulation of the mix in favor of invasive and climate-favored forest species, as opposed to the passive approach where proposed management measures aim to allocate new areas to successional types that will favor the spread of desired forest species.

Strategy 2: Resilience

This category includes strategies targeting forest ecosystems that, while exposed to gradual changes or abrupt disturbances related to climate change, have the ability to "bounce back" to pre-disturbance or pre-change conditions through natural processes (referred to in this context as regeneration or adaptive capacity). Management measures are proposed in this category to facilitate the dispersion of forest species over short distances (natural regeneration) or long distances (migration).

Strategy 3: Transition/Transformation

Targeted assistance for adaptation to change that enables or facilitates forest ecosystems to adapt as environmental changes increase. This strategy can be implemented in three forms: autonomous, controlled, and expedited, depending on the expected speed of climate change.

Key words: Adaptation, Forest management, Climate change

**ENHANCING THE RESILIENCE OF THE SCHINIAS-MARATHON
NATIONAL PARK THROUGH THE REINFORCEMENT
OF PINUS PINEA**

T02087

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Abstract

The National Park of Schinias - Marathon is recognized as one of the most significant coastal ecosystems in Attica, boasting a rich diversity of plant species and harboring 22 habitat types. Notably, the wooded dunes with *Pinus pinea* priority habitat (2270), a unique and valuable feature for Attica and one of the few remaining sites for this species in Greece.

However, the stone pine forest in the coastal area currently confronts two major threats. Firstly, the impact of climate change has led to a gradual decline of the forest. Most of the existing stone pine trees are aging, and their regeneration poses a significant challenge.

BOOK OF ABSTRACTS

1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

Concurrently, the Aleppo pine has expanded its dominance within the area. Secondly, human activities, particularly the high volume of visitors, have led to the degradation of the area. This is evident in the increased density of both tree species as the distance from the sea increases.

To support the regeneration of the *Pinus pinea*, three experimental replications were fenced and 25 wire cages were installed, to facilitate planting, sowing, and monitoring of its regeneration. Various approaches were employed, including planting seedlings of differing ages (1-year and 7-year-old trees) using distinct methods such as standard planting, planting with plastic covering, and planting with hydrogel application. Furthermore, a diverse range of seed-sowing treatments, encompassing direct sowing and sowing in trays with soil cultivation were employed in protected locations.

Preliminary results revealed that there were no significant differences based on the planting method. The survival rate of planted 7-year-old seedlings was notably low, averaging 16.7%, whereas younger seedlings showed a higher average rate of 56.9%. Regarding seed sowing, the survival of well-established plants after the second year were marginal. These findings will significantly contribute to the selection of the most efficient methods and practices aimed at enhancing the priority habitat 2270.

Key words: *Pinus pinea* priority habitat (2270), coastal ecosystems, natural regeneration, planting and sowing methods, biodiversity conservation, ecological restoration

BOOK OF ABSTRACTS

1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

DEVELOPMENT OF MEDITERRANEAN AGROFORESTRY LANDSCAPES RESILIENT TO CLIMATIC CHANGES: THE ResAlliance PROJECT

T02059

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BOOK OF ABSTRACTS

1st Open-Air Cities International Conference "Local & Regional Sustainable Development and Urban Reconstruction", Harokopio University of Athens, February 16-18, 2024

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Abstract

Climate change is leading earth to more frequent and severe extreme weather events. The Mediterranean region, experiencing a 20% faster rate of warming compared to the global average. Despite these challenges, there is a growing interest into community on enhancing resilience at the landscape level. In light of this context, "ResAlliance," or the "Landscape Resilience Knowledge Alliance for Agriculture and Forestry in the Mediterranean Basin," is a thematic network project established by an international consortium of 16 partner organizations, funded by Horizon Europe.

The primary goal of ResAlliance is to enhance the flow of information and knowledge while building the capacity for foresters and farmers in the region to strengthen landscape resilience. Focusing on Mediterranean countries, ResAlliance identifies and evaluates gaps, hindrances, existing knowledge, and best practices to achieve resilient landscapes in the face of climate change hazards, (fires, drought & floods). This is accomplished through four key thematic areas that set specific learning objectives to address knowledge and implementation gaps: Governance, Management practices, Technology, and Finance.

To achieve its objectives, ResAlliance promotes interactive initiatives involving multiple stakeholders at two levels: the creation of a LandNet, an open Mediterranean thematic network focusing on landscape resilience for forestry and agriculture, and the establishment of five LandLabs, a tool designed to facilitate knowledge transfer and activate regional landscape resilience solutions in five different Mediterranean countries, namely Portugal, Spain, Italy, Greece, and Cyprus.

Key words: resilient landscapes, agroforestry, LandNet, LandLab

**WILDFIRE HAZARDS OF PERI-URBAN FORESTS AND
SILVICULTURAL APPROACHES, THE CASE OF PERI-URBAN
FOREST OF XANTHI**

T02183

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Abstract

Peri-urban forests stabilize and protect neighboring, unstable urban ecosystems. They protect soil from erosion and cities from disastrous floods. Moreover, peri-urban forests increase biodiversity in peri-urban areas and offer high-value landscapes and opportunities for recreation to city residents. However, conifer peri-urban forests also pose a direct danger to neighboring urban areas. This is the hazard of a huge wildfire that will not only destroy the forest ecosystem but also threaten human lives and urban infrastructure. In the context of climate change, the possibilities of such huge wildfires that will affect enormous areas, including peri-urban areas, have increased. Silviculture must develop approaches and methods to reduce the possibility of the occurrence of a wildfire and, if a fire bursts, not quickly acquire large dimensions and intensity. Thus, the danger of a catastrophic wildfire will be reduced, and there will be time for extinguishing the fire at an early stage. These approaches include vegetation treatments, the creation of protection zones, etc. Xanthi peri-urban forest is, in a large area, a planted conifer forest consisting mainly of *Pinus brutia* trees. The plantation reforestations began in 1936 and continued for many decades. In many areas of the peri-urban forest, gradually broadleaved species were established under the overstory of the conifers. The main goal of the silvicultural treatments in the area is to change the forest composition, through the appropriate cuttings and thinnings, from a conifer-dominated forest to a broadleaved forest or to a forest of conifers and broadleaved trees. Moreover, to protect urban infrastructure from forest fire protection zones of various sizes, vegetation density and species composition must be created.

Key words: Peri-urban forests, conifers, wildfire, silviculture

**SECURING SUSTAINABILITY OF FOREST TREES IN RELATION
TO GENETIC AND EPIGENETIC POOLS**

T02060

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Abstract

Forest trees, as intricate organisms, currently confront various threats stemming from climate change, diseases, insects, and pathogens. Their capacity to adapt to changing environments hinges on the integrity of their genetic and epigenetic makeup and the interplay between them. Epigenetics, in this context, pertains to the exploration of heritable alterations in gene expression and function that cannot be attributed to changes in the DNA sequence. A broader analysis of the epigenome at the landscape level can yield valuable insights into identifying genomic regions associated with adaptive variations.

While population genetic analysis has shed light on how genetic diversity, structure, and linkage operate, comprehending the role of variation in epigenetic processes at the population level remains a complex challenge. This challenge arises from the difficulty in linking epialleles to variations in observable traits, which differs from classic genetic analysis, where genetic variations can account for a portion of phenotypic diversity. Recognizing this complexity has recently gained prominence, leading to studies that investigate genetic and epigenetic diversity in natural forest tree populations. These studies aim to establish the connections between genetic and epigenetic factors and explore the additional aspects of epigenetic diversity contributing to variations in observable traits and adaptability. By assessing epigenetic diversity, particularly DNA methylation, we can enhance our understanding of the mechanisms responsible for natural variations in ecologically significant characteristics. In this study, results from genetic and epigenetic data of forest plants will be presented.

Key words: genetics, epigenetics, adaptation, DNA methylation

**MEASUREMENT AND COMPARISON OF INHALABLE DUST
BETWEEN PERI-URBAN FOREST AND URBAN ENVIRONMENT**

T02094

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Research has shown that urban and peri-urban vegetation is capable of retaining large amounts of atmospheric particles, thus bringing about substantial improvements in urban air quality. For these suspended atmospheric particles, the term particulate matter (PM) is used referring to small-sized solid or liquid matter suspended in the air. The purpose of this paper was to examine the role of a peri-urban forest in mitigating dust levels in a neighboring urban area setting by measuring inhalable dust concentrations there and in the surrounding city. To get consistent data across the year's three seasons namely summer, autumn, and winter, we took three sets of inhalable dust readings using our personal SKC Button Sampler. Measurements were performed in three repeated time cycles so that PM10 data could be collected from three different seasons of the year. Data were obtained from a total of 15 sites, 9 of which were located in the peri-urban forest and 6 in the urban fabric. Overall, data collection was carried out from July to early March and included 45 sampling days. A total of 45 samples were collected, 27 of which were obtained from a peri-urban *Pinus brutia* forest and 18 from an adjacent urban area (9 and 6 samples in each repeated sampling cycle, respectively). Results obtained from both sampling areas show a significant increase in PM10 levels during the summer (8.86 mg m⁻³/24h) in comparison with the autumn and winter concentrations (3.71 mg m⁻³/24h and 4.12 mg m⁻³/24h, respectively). The PM10 concentrations in both sampling regions were found to be significantly higher in the summer than in the fall and winter.

Keywords: PM10, air pollution, Button Sampler, peri-urban forest

Pre-organised Special Session:

**“Spatial Resilience. Conceptual approaches,
Policies, Implementations.”**

Organized by Prof Konstantinos Lalenis

**RESILIENCE, REGIONAL RESILIENCE, URBAN RESILIENCE:
INTRODUCTION TO THEORY**

T02061

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Abstract

The concept of resilience has been one of the dominant in recent years in the formulation of strategies for spatial planning. The relationships and interaction of resilience with sustainability have occupied a significant body of research and theoretical approaches, as has the related question of whether resilience is always beneficial for the system under consideration, or under certain circumstances may be negative, due to limitation of its adaptability. However, it seems that in recent years resilience has enriched its conceptual content and is combined with other characteristics such as adaptability, innovation and transformation. Today, resilience is seen as a critical feature of healthy ecosystems, individuals, communities, organizations and cities and is seen as essential for building a sustainable future.

This paper attempts an introduction to the theoretical concepts of resilience with special focus on its spatial component. Regional and urban resilience can help cities and communities better withstand and recover from shocks and stresses, and there are a growing number of tools and frameworks available to help guide this process. Urban resilience acquires an important specificity due to the complex urban environment that constitutes the main framework for cultural reproduction of human societies. This chapter presents definitions and interpretations of resilience, describes its conceptual enrichments and configurations, and reference is made to the main dimensions of its spatial component, which are analyzed more extensively in the rest of the presentations of the session. Thus, this presentation sets the general framework for the special session "Spatial Resilience. Conceptual approaches, Policies, Implementations" and constitutes its introduction.

Keywords: resilience, urban resilience, physical disasters, man-made shocks, climate change

**PANARCHY: UNVEILING AN IMPORTANT DIMENSION OF
RESILIENCE’S CONCEPTUAL FRAMEWORK**

T02164

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Abstract

Resilience is more like a metaphor rather than theory. We would say that it is a conceptual framework and It mainly uses two metaphors, the adaptive cycle metaphor and the landscape metaphor.

In 2017, the United Nations report on housing elaborates issues of Urban Resilience. Analyzing the concept of Resilience, it shows its evolution from its mechanical dimension to the ecological one and then to the evolutionary dimension. Since our cities are now obliged to cope with a rapidly evolving world, they need to acquire Evolutionary Resilience so as to be able to respond to disturbances, the nature of which is sometimes unpredictable and often exogenous.

But how does this other thing, the exogenous thing, affect us and how much? What we seek to metaphorically express is the creation of semi-autonomous levels of interactions between process variants that share a similar rhythm and space (Holling et al., 2002b: 72). The aforementioned levels are nested within others; we are therefore interested in investigating the correlation structure of these clusters of Nested Circles, - the multiple distinct levels of these complex systems - identifying primarily the scales of space and time in which they operate and the interconnections between them. However, the Cycle of Adaptation cannot explain on its own how exactly change is born and diffused in our world. We need a different metaphor to understand the connections and interactions between the processes of different levels of space and time. Panarchies, clusters by scale, affect the functioning of our systems, in this case, the civil ones. This is the fourth and most critical dimension of Resilience.

Key Words: resilience, evolutionary resilience, panarchy, land scape metaphor, adaptive cycle, social-ecological systems, complex adaptive systems

**EMBRACING THREATS: THE ART OF RESILIENT RHETORIC
IN SPACE POLICY**

T02097

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Abstract

In recent years, building the resilience of social, economic, residential and institutional systems, in front of the multiple forms of crisis manifested in the modern world, has been imposed as an urgent political priority at the international level. In the field of ecology, it is argued that social-ecological systems can be resilient by developing the capacity to defend and adapt to external disturbances. The transfer of this process to the political field legitimizes policies aimed at selectively limiting the effects that these crises have on the development process, without taking into account their causes and multidimensional character.

The climate crisis that is currently underway offers the possibility to interpret every contradiction of the existing socio-economic order as an unpredictable natural phenomenon, to which we will have to adapt to survive, despite any losses. As a synonym for survival, resilience thus becomes the magic word / tool in the hands of politicians, which makes their every choice self-evident by invoking risks and challenges, and limiting planning to managing risks and exploiting the opportunities that crises highlight. It thus becomes the most sophisticated tool of neoliberal governmentality, a tool for constructing a deeply anti-democratic form of state and a lonely, fearful subject, bulimic for security.

Our paper will argue that, by presenting crisis or threat as a key regulator of space, contemporary space policy cultivates notions that are not only anti-environmental but also ahistorical and anachronistic, offering a ground of arbitrariness that is particularly slippery, as the question of resilience becomes a question of adaptive governance and an opportunity for reforms in a neoliberal direction.

Commenting on examples of applied resilient planning in our country, on the occasion of the management of the recent flood in Thessaly, we will argue that, in the neoliberal condition, what matters is the cost of resilience, the selective distribution and efficiency of the relevant investments, the spectacle of mobilization regardless of its effectiveness.

Key words: resilience, adaptive governance, neoliberalism, development planning, space policy

PUBLIC SPACE AND URBAN RESILIENCE

T02080

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Abstract

According to the United Nations predictions, by 2050, cities are set to house 68% of the world's population. Pressures that caused by the climate change, natural and man-made hazards, pandemics, epidemics, migratory population and different kind of crises will intensify. The above factors are important reasons for innovative urban resilience policies and strategies. As urbanisation increases, urban resilience will need to be strengthened.

An integral part of the cities is their public urban space (green spaces, open spaces etc), which is the dominant place for all functions (economic activities, exchange of goods, services, ideas, accessibility, mental and social stability, prosperity). In these spaces, the application of urban resilience policies will prevent from sudden, unpredictable disasters and will promote the creation and maintenance of connected and distributed networks of open, multi-use, secure, inclusive, accessible green spaces that will strengthen the resilience of cities. Also urban resilience policies will prevent vulnerable dwellers from social exclusion.

The research of institutional policies and legal tools in Greek urban planning legislation reveals a lack of urban resilience planning tools for the prevention of sudden hazards and crises in urban public spaces. The recent adoption of Laws (L.4447/2016 and L.4759/2020), sets urban resilience criteria and technical specifications to the Local Urban Plans and Special Urban Plans. This is a turning point for better planning policies.

In this article, institutional policies for public urban spaces are examined in relation to Greek legal framework for urban resilience planning tools and practices in order to fully integrate them into the urban planning policies for better management of crises and disasters.

Key words: public urban space, urban resilience, disaster, climate change, legal framework, policies.

**NECRO-RESILIENCE: CEMETERY RESILIENCE AND ITS ROLE
IN URBAN SYSTEMS**

T02056

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Abstract

Within the social infrastructure of an urban complex, apart from common areas, social facilities such as public schools, sports facilities, and other structures with social and cultural functions are included. One of these functions is the cemetery, or more broadly, a space for the management of the deceased. The cemetery represents a timeless image of the city and serves as a mirror of its political, economic, and cultural life. With its own urban plan, featuring both public and private spaces, it often resembles – even replicates – the city itself, constituting an urban system. However, due to intense and diachronic interactions with the city, they together form a unified urban system.

Similarly, 'urban resilience' is the capacity of a city or an urban system to withstand shocks and stresses while simultaneously absorbing, adapting to, and responding to significant changes, as well as daily pressures and demands, which are typically more long-term. Managing disturbances, whether they are extraordinary or daily, within the framework of cemetery resilience, affects and participates in the city's resilience. Failures in addressing some disturbances in the cemetery negatively impact the city's resilience, and conversely, failures in addressing certain city disturbances affect cemetery resilience. All these adverse effects from extraordinary and daily occurrences pose a challenge but also an opportunity for innovative approaches in the management of the deceased and the operation of their spaces, always taking into account their significant involvement in the city's society.

The resilience of the cemetery, like that of any urban infrastructure, and the ability to restore them, depend on appropriately updated disaster recovery plans, in combination with modern technology.

Keywords: cemetery, city, resilience.

**LEVERAGING BLOCKCHAIN FOR SMART CITY RESILIENCE:
STRENGTHENING PREVENTION AND CIVIL PROTECTION
SYSTEMS**

T02074

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Cities today present a growing need for risk management of complex crises and disasters, often caused by natural hazards or human-induced (i.e. climate change, violent population dislocation, etc.). In any case or urban threat, civil protection faces two critical aspects: a) the level of readiness and prevention and b) the ability to coordinate actions and necessary responses to those demanding urban crises.

This paper aims to address those two aspects by using Blockchain technology presenting a theoretical framework suggesting an automated and decentralized database system that shares vital information to civil protection agents. A central objective of this technology is to minimise human errors, when handling critical data, and consequently assist in any decision-making process of a threatening urban condition.

More precisely, the framework suggests an information flow and communication system based on "smart contracts" that will represent a coordinating basis of all involved agents and services, prior to, during and following an urban crisis. The suggested decentralized application (DApp) and conceptual model is correlating current literature review on urban risk management and Blockchain technology and is presenting a functional four stages - scenarios according to the current institutional framework of civil protection in Greece.

Key words: Urban resilience, risk management, blockchain,

**PROXIMITY ORIENTED DEVELOPMENT FOR URBAN
RESILIENCE: THE CASE OF 15 MINUTE CITY**

T02054

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Abstract

The successive economic, environmental, and health crises in recent years have highlighted the vulnerability of cities and the need for immediate responses and management of global shocks at the local level. Specifically, the inadequacy of cities' response to the recent global health crisis as well as the ongoing climate crisis has brought to the forefront long-term structural deficiencies in the function and structure of urban areas. Recognizing these deficiencies, the global scientific community strongly advocates a new city planning model known as the "15-minute city." In fact, recent global agendas endorsed the 15-minute city as an urban planning practice for adapting and responding to contemporary crises and challenges.

Within this context, this paper introduces the core principles and premises for implementing the 15-minute city, with a particular emphasis on the physical planning perspective. It focuses on the notion of proximity and attempts to compose a framework for the emerging concept of Proximity Oriented Development through the 15-minute city paradigm.

The paper starts with a brief critical overview of the neighborhood as a functional and structural unit of urban space, placing emphasis on the perspective of people-centric urban planning. The notion of accessibility by proximity and its implications to land use planning through the lenses of "chrono-urbanism" is then presented. Subsequently, the fundamental principles of 15-minute city are explored with a particular emphasis on proximity of urban amenities and city self-sufficiency. The paper concludes with the “POD Flower” as a framework for the concept of Proximity Oriented Development discussing the major components and challenges of such approach.

Key words: Proximity Oriented Development, the POD flower, 15-minute city, proximity planning, urban resilience, land use models, urban planning.

BUILDING SUSTAINABLE URBAN MOBILITY FOR RESILIENT CITIES: INSIGHTS FROM ATHENS MUNICIPALITY

T02051

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Abstract

The need to reduce dependence on the vehicle use and the promotion of sustainable forms of transportation are key factors for resilient cities. In the current paper, the role of sustainable urban mobility for the development of resilient cities is analyzed with the municipality of Athens examined as a case study.

The first section of the paper examines the principles of sustainable urban mobility, the international policies that promote its development and the means of transport that must be promoted. It examines the role of mass transport means, cyclists' and pedestrians' networks that should function as alternative for the reduction of private vehicles traffic in cities.

In the second section, a critical analysis of the diachronic development of sustainable urban mobility in the municipality of Athens is carried out. It focuses on the policies that have been implemented for the promotion of sustainable urban mobility from the 1970's until today. Its basic aim is to examine the mobility interventions that have been implemented and the policies applied to promote pedestrians and cyclists' networks and the infrastructures for the development of Mass Transport Means networks. Finally, it analyzes the recent Sustainable Urban Mobility Plan of the municipality, and it examines its connection with the achievement of urban resilience.

Key words: urban resilience, sustainable urban mobility, Athens.

**UNVEILING SOLIDARITY URBAN COMMONS: CRITICAL
PERSPECTIVES ON RESILIENCE IN REFUGEE
ACCOMMODATION IN ATHENS AND THESSALONIKI**
T02064

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Abstract

Usually, the movement of more than a million people from the Middle East, Central Asia and Africa to Central and North Europe through Greece in 2015-2016 has been characterized as a “refugee crisis” and therefore raises the question of whether cities of arrival or transit are resilient enough to respond to such “crises”. However, the question of why migration is a moment of crisis for cities and how the concept of resilience is linked to migration is an open research question.

The cities of Athens and Thessaloniki were in the last decade at the center of the so-called “refugee crisis”, as thousands of newcomers that crossed Greece on the journey to North Europe, stayed in Athens and Thessaloniki for long periods of time and some of them settled permanently. At the same time, the Municipalities of Athens and Thessaloniki have been participating for the last decade in the “100 Resilient Cities” international network. Also, the two cities are founding members of the European network “Solidarity Cities with Refugees”. However, focusing more specifically on the institutional housing policies implemented in Athens and Thessaloniki, these include settlement of refugees in isolated accommodation centers - camps, which are located at a great distance from the urban fabric, in areas unsuitable for residential use. Also, in opposition to the institutional housing policies, a wide variety of self-organized housing structures and self-managed solidarity projects were created within the urban fabric of Athens and Thessaloniki, which can be perceived as urban and housing commons of newcomers.

The aim of the paper is the critical confrontation with the rhetoric of the concept of resilience in relation to migration and its comparison with the transformative possibilities of solidarity urban commons of the newly arrived populations.

Key words: Urban commons, Resilience, Refugees, Athens, Thessaloniki

**BATTLING URBAN FLOODS: SPATIAL PLANNING, EDUCATION
AND PREVENTION INITIATIVES FOR ENHANCING RESILIENCE**

T02123

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Floods are the number one natural disaster on the planet, according to UN indicators, and constitute a multifaceted issue that causes complex consequences, affecting many sectors of the economy. Flooding can often cause major property damage and threaten human health, especially in densely populated urban areas. The intensity and frequency of flooding phenomena in urban areas are a reality that is taking on ever greater dimensions both in Europe and throughout the world. Although they are not new phenomena, their frequency and intensity show an alarming increasing trend due to climate change.

The entanglement of flood risk in urban areas with the concept of urban resilience is a long-standing issue in the research community. Although flood risk in urban areas has been extensively studied in terms of its technical characteristics, the field is clearly lacking regarding the holistic approach to mitigating the effects of flood events both in terms of protecting human life and material losses, which includes the spatial planning, prevention infrastructures but also the citizen engagement.

Prevention using new artificial intelligence technologies, providing the correct information, and improving infrastructure through a more environmental approach are the basic tools to reduce the effects of flood phenomena and strengthen the resilience of an area.

The purpose of this paper is to highlight the aforementioned condition and at the same time the necessity of a holistic approach and integrated planning through soft actions (spatial planning, education, early warning systems through intelligent agents) to shield urban resilience.

Key words: urban foods, resilience, prevention initiatives, spatial planning, citizen engagement

BOOK OF ABSTRACTS

1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

Thematic Session:
“Circular Economy”

BOOK OF ABSTRACTS

1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

CIRCULAR ECONOMY IN CONSTRUCTION - A STAKEHOLDER PERSPECTIVE

T02055

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Abstract

Natural resources are finite; therefore, the efficient use of these materials is necessary for a sustainable future in the construction industry. Making better use of the materials at our disposal is paramount for material resource efficiency. To minimise environmental impact the objective is to use material resources in the most sustainable manner. Additionally, global energy related carbon emissions from buildings equates to 39%, with 11% of this accounting for materials and construction of the buildings. There is an immediate need to decarbonise the construction sector. One method of helping to achieve this is the implementation of circular economy, the application of which, though, is currently in its infancy. Successful adoption and implementation therefore remains an enormous global challenge. There is a need for businesses to develop effective strategies to overcome the significant barriers to ensure the circularity of materials.

This paper aims to advance understanding of the needs and barriers associated with the implementation of a circular economy to aid in the decarbonisation of the construction industry. A semi structured interview process was used to identify barriers and needs within the construction industry, with participants providing insights from their roles within construction and material use. The results of this study provide barriers to circular economy in construction and the strategies required to overcome these barriers.

Key words: Circular Economy, Reuse, Recycle, Deconstruction, Construction, Waste

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**EXAMINING CITIZENS’ PERCEPTIONS AND BEHAVIOUR WITH
RESPECT TO CIRCULAR ECONOMY PRACTISES IN THE
CONSTRUCTION SECTOR**

T02091

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The CO2NSTRUCT Horizon Europe project (2022-2026) seeks to provide a framework for incorporating Circular Economy (CE) measures into the value chain of six construction materials (brick, cement, glass, insulation materials, steel, and wood) into the JRC-EU-TIMES energy systems model. One of the main objectives of the project in this respect is to develop an approach for analyzing citizen behavior on CE measures and to adapt the JRC-EU-TIMES model according to the associated findings. On this premise, a study is conducted on how people perceive and respond to CE and climate change issues, as well as how this impacts the creation of mitigation measures for climate change.

The first stage of the study was to conduct a literature review relevant to the project's themes to identify research gaps and opportunities in citizen behavior related to climate change mitigation through CE. A theoretical model has been developed based on the literature review findings, incorporating citizens' perceptions, attitudes, intentions, and behavior on circular construction materials.

On this basis, a questionnaire has been created, considering diverse CE practices, such as space sharing, component reuse, use of recycled construction materials, performance of dwelling renovations, and use of innovative construction materials. A questionnaire survey

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will be performed during November – December 2023 in nine European countries (Denmark, Germany, Greece, Italy, Poland, Portugal, Romania, Spain, and the UK); 500 participants will be questioned in each country, leading to a total collected sample of 4500 responses.

The collected sample will be analysed through different statistical methods to identify the determinants of citizens' intentions and behavior, and to detect similarities/differences between the nine countries. Hence, the analysis will provide input for the JRC-EU-TIMES model while also assisting the development of targeted strategies and policies in relation to climate change mitigation through CE practices in the construction sector.

Keywords: Circular economy, construction sector, climate change mitigation, attitudes, intentions, behavior

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**CONSUMER PERCEPTION OF NEAR-EXPIRY FOODS
AND RETAILERS PRACTICES TOWARDS IMPROVING
SUSTAINABILITY PERFORMANCE**

T02108

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International studies on food waste highlight that it is critical to reduce or even eliminate food waste, towards meeting sustainability goals. In this direction, consumer behavior is essential as well as how businesses prevent generation and management of such a waste. Date labels are one of the main external indicators that have a decisive role in the purchase of near-expiry foods. In addition, food retailers are in a strong position to influence the reduction of food waste by producers, manufacturers and consumers, by managing dynamically products prices to increase ‘last moment’ demand and reduce thus food waste.

In this respect, the present paper aims to study consumers perception of nearly-expired products. Moreover, it turns the focus to practical aspects of the subject, namely to retailers’ pricing policy and practices towards reducing expired products and eventually waste.

A survey that has started at the end of summer of 2023 (211 participants till October 2023) revealed that indeed many consumers buy the products that offer them the highest benefit at the price offered, due to their expiration date. In addition, they believe that it is more sustainable to lower the price of a product so that it does not remain on the shelf. In this context, they need to be better informed about the expiry date of the products, as well as the dynamic pricing policy of the retailers and subsequent prices drop. These paper findings provide useful insights for retailers to improve their inventory management performance and reduce food waste.

Key words: Nearly-expired foods, food waste, sustainable consumption, consumers, sustainability, date labeling

RETROFITTING [INDUSTRIAL] ECOLOGIES

T02137

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Abstract

This paper delves into a design proposal for the Naga' Hammadi Sugar Cane Factory in Upper Egypt, strategically positioned on the western bank of the river Nile. Contrary to challenging the factory's ongoing production and economic legitimacy, the design proposal addresses the adverse effects associated with its current operational model, specifically targeting issues related to air pollution and the occupation of agriculturally suitable land.

The envisioned redevelopment along the riverbank goes beyond mere mitigation, actively embracing and amplifying the productive essence inherent to the site. Through a thoughtful adaptation of the existing system, the outcome is the establishment of an eco-industrial and technological park. Functioning as a transformative tool, the park is conceived with the overarching goal of evolving the industrial site into a dynamic and vibrant urban environment, fostering sustainable development.

The park, designed as an open and adaptable system, exhibits a strategic foresight by incorporating components that can be easily retrofitted to seamlessly accommodate the ever-evolving demands of production and environmental standards. This foresightedness not only enhances the park's functionality but also positions it as a resilient and dynamic entity capable of withstanding changing needs over time.

The generic nature of the intervention further contributes to the versatility of the proposal, promoting a myriad of possibilities for adaptations to organically emerge and function effectively in diverse contexts. This multifaceted approach ensures that the proposed eco-industrial and technological park is not only a localized solution but also a scalable and replicable model with the potential to positively impact various industrial landscapes. Overall, this paper provides a nuanced exploration of the design proposal,

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elucidating its intricacies and emphasizing its potential to act as a catalyst for sustainable urban development in the broader regional and global context.

Key words: Egypt, Industry, Eco-Industrial Park, Sustainable Urban Development

This paper elaborates on a design proposal for the Naga' Hammadi Sugar Cane Factory in Upper Egypt, located on the western bank of the River Nile. The design proposition does not seek to challenge the factory's ongoing production and economic legitimacy but instead focuses on addressing the adverse effects associated with its current operational model, particularly pertaining to air pollution and the occupation of agriculturally suitable land. The proposed redevelopment along the riverbank embraces the productive essence of the site and adapts the existing system, resulting in the establishment of an eco-industrial and technological park. This park serves as a transformative tool with the aim of evolving the industrial site into a vibrant urban environment. Envisaged as an open and adaptable system, the park's components are strategically designed for easy retrofitting to accommodate evolving production and environmental requirements. The generic nature of the intervention promotes a multitude of possibilities for such adaptations to emerge and function effectively in diverse contexts.

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Thematic Session:

“Public Spaces and Urban Mobility”

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TRANSFORMING SMALL SCALE PUBLIC SPACES IN THE POST-PANDEMIC ERA

T02079

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Abstract

The COVID-19 pandemic has the potential to bring about significant changes in the transformation of urban public spaces. It has had a profound impact on both indoor and outdoor public areas, causing widespread damage to various socioeconomic aspects of daily urban life, given their close connection to these spaces. The rapid spread of the pandemic across countries in Europe and around the world has disrupted public life in outdoor spaces, revealing the inadequacy of our previous design approach in dealing with such challenging conditions. It is important to note that this pandemic is not the first, but rather the latest in a series of four deadly pandemics since 1918. It is evident that the last pandemic arrived at a time when Europe had little concern for the effects of urban density and the role of mobility in the spread of infectious diseases. The combination of urban density and mobility exacerbated the situation, particularly in the early stages of the pandemic. Desperate attempts to manage the situation in large public spaces, which were originally designed with a different perspective, resulted in absurd and almost dystopian scenarios that disrupted social life and communication. The sense of freedom associated with open public spaces was replaced by fear and strict restrictions.

“So, a crucial question arises: what measures are necessary for urban environments to adapt to such situations as the above? Is it possible for unconventional designs or innovative technological solutions to preserve the essence of human interaction and social life?”

Key words: COVID 19 pandemic, post pandemic era, small scale urban spaces, resilient urban design, network of public spaces, urban landscape

**URBAN CULTURES AND PUBLIC OPEN SPACES: THEIR
INTERPRETATION DURING CORONAVIRUS PERIOD**

T02124

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Abstract

Nowadays, the pandemic period is a characteristic facet of the recent past era and in the meantime, it is an ongoing condition with vulnerable balance of the relationships with the place.

The technological progress combined with the demanding rhythm of daily routine creates the urban cultures. They are characterized by a fundamental need of connecting with the public open space, even merely with the orientation and the view perspectives. As the meaning of the place refers to the feeling of belonging to somewhere, to a space with discrete character, individuals and social groups have an unstoppable need to correlate with their environment developing interaction. Especially for urban cultures, public open spaces offer a kind of freedom, as well as a reminder of a healthy social life.

During the pandemic, the axis of socialisation, physical exercise, the feeling of belonging and mental health seemed to be prone to unbalance because of the entirely new character of the universal phenomenon. At the really first months of the obligatory quarantine, even the open space would seem dangerous, as people preferred and selected the safe decision of resting at home. But, the need of social interaction, the physical need of the body to move and assess the qualities of the urban culture of which it is constitutional part, encourage people to evaluate the importance and uniqueness of public open spaces. People begun to discover and explore the urban fabric e.g., the squares, the parks, the walking routes, and the options of exercise. Respecting health security, public open spaces have established their character of outstanding value, offering the chance to interpret the living place of society, with the conception of space qualities designed in the urban fabric.

To assess the value of open spaces and their interactions with everyday social life which impact the urban wellbeing and the urban mindset during the pandemic period, a survey with questionnaires took place in the city of Kavala to record the opinions of society regarding the public open space.

Key words: urban cultures, public open spaces, urban identity, urban fabric, pandemic

IMPROVING ACCESSIBILITY, INCLUSIVENESS AND CO-BENEFITS OF PUBLIC SPACES IN EURO-MEDITERRANEAN CITIES: A SOFT STRATEGY APPROACH AND THE CASE OF KALLITHEA (ATTIKI)

T02153

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Abstract

A city with a low environmental footprint, providing a safe, high-quality, inclusive urban environment, opportunities for its inhabitants, and attractiveness to visitors, employees, and investors, tends to prevail as a highly sustainable urban model. Sustainable mobility, coupled with principles of accessibility and inclusiveness, is a fundamental element of urban planning and design.

In this context, new practices tend to complement, through localised radical interventions, the dispersal of relevant routine projects, which often has little impact on urban quality. A strategy based on designing connections between crucial focal points, considering deficiencies and opportunities in the urban fabric, could establish priorities for implementing sustainable design principles that offer co-benefits.

A relevant example is the proposal to connect institutions for blind people in Kallithea City: "Blind's House" (El. Venizelou 210) with "Blind's Lighthouse" (Athinas 17). This connection is vital, as observations and literature document moderate pedestrian accessibility and low PRM accessibility in the area. The connection involves creating a path designed to facilitate blind people, passing through streets selected based on geometric and traffic features, with suitable rest areas, aligning with the "15-minute city" principle.

This option considers:

- The future extension of metro L1, including a station next to "Blind's House."
- The possibility of extending the path to reach the nearby located SNFCC from "Blind's Lighthouse" and the future metro L1 terminal.
- Enriching the suggested path with multisensory design elements.
- The social and environmental benefits of the proposed path for all users.
- The benefits of prestige and attractiveness for Kallithea City, coupled with the enhancement of residents' commitment, as an urban configuration triggered by the lack of accessibility for PRM, would strongly signal design priorities and the concern of the local government.
- The possibility of a gradual extension of the proposed path aiming to develop a network diffusing pedestrian mobility and corresponding benefits.

Key words: UrbanAccessibility, Inclusiveness, Multisensory urban design, Euro-Mediterranean cities, 15-minute city, Athens Metropolitan Area, Kallithea.

**SUSTAINABLE MANAGEMENT OF PUBLIC SPACES
AND THE 17 UN SDGs. A RESEARCH CASE STUDY
ON THE OLD TOWN OF CORFU, GREECE.**

T02158

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Abstract

Public open spaces have always been considered as an important factor of a city's character due to their accessibility and openness, especially as they welcome a high stream of activities, from commercial use to cultural interaction and social engagement of people. According to the Recommendation on the Historic Urban Landscape, the world is facing uncontrolled urbanization which could lead to the loss of public space. Furthermore, the current modernization of life standards has created new working and living patterns and a tendency to vacant urban centres for the benefit of tourism and short-term abidance, a situation even more evident in the case of historic areas and cities. Public spaces in historic cities are mostly threatened from degradation as well as the loss of cultural identity and therefore a sustainable future. In 2015, the United Nations established a set of seventeen Sustainable Development Goals for 2030, as an Agenda for global prosperity, peace, planet environmental protection, and people safety. Subgoal 11.7 is about universal access to safe, inclusive, and accessible green and public spaces, especially for women and children, the elderly, and people with disabilities.

The objective of this ongoing research is to investigate the sustainable management of public spaces in the Old Town of Corfu, Greece, which has been recognized as a UNESCO World Heritage Site. The research presents a management proposal that includes the design of a questionnaire, intended to be addressed to several local stakeholders and community members. The research presents the involvement of the 17 UN SDS's and especially subgoal 11.7 in the management techniques that are in place now and will also be implemented in the future and how they may affect the authenticity and integrity of the site. Anticipated principal discoveries of the study will underscore the significance of community involvement into administrative approaches.

Key words: public spaces, sustainability, Old Town of Corfu, 17 SDGs

**A LITERATURE REVIEW ON THE INTRODUCTION
AND DOMINANCE OF THE AUTOMOBILE IN THE CITY
WITH THE AIM OF PREPARING THE CITY FOR THE FUTURE
MOTOR VEHICLE**

T02133

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Abstract

The significant impact of the rise of automotive vehicles in everyday life is evident. Since the first gas engine powered vehicle of Benz on 1886, not only mobility transformation but also city layout design are continuously witnessing modification and evolution that try to cope up with the new innovations automotive technology has to offer. The debate whether this vehicle-oriented growth and urban design transformation is favorable, sustainable or not is still ongoing.

But how have the vehicles themselves impacted everyday life and citizen behaviour? This article aims to systematically analyze the impact of automotive vehicles on everyday life during the 20th and 21st century, spanning for example from mobility transformation and democratization, city layout alterations and open space allocation. The appearance, the integration, the spread and the recently highlighted limitation of the car use in the cities is examined presenting different views.

Initially the methodology for this survey is discussed and inclusion criteria are analyzed. Focus is not only given on the pure research literature, but also on how vehicles and their evolution have impacted other areas like art and how art or performance have reflected people's perception of vehicles on their everyday life. The analyzed information is grouped in a taxonomy that outlines a clustering of the prior art.

Key words: automobile, impact of automotive vehicle, urban design transformation, spread of car use, limitation of car use, sustainable

**THE 2030 UNITED NATIONS AGENDA FOR SUSTAINABLE DEVELOPMENT AND THE GOAL 11 FOR SUSTAINABLE URBAN DEVELOPMENT. THE "SMART", THE "OPEN" AND FINALLY THE SUSTAINABLE CITY.
THE SUSTAINABLE URBAN MOBILITY PLANS**

T02162

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Abstract

The 2030 United Nations Agenda for a sustainable development reveals 17 sustainable development goals to change the world, on a way towards dignity, as it has been characterized, until 2030. Especially the goal no 11, is about making cities and human settlements inclusive, safe, resilient and sustainable, without exclusions.

From 2008 and for the first time in human history, the world's urban population surpassed the world's rural population, according to UN data. The human population is on a continuous rise and is expected to increase even more in cities. But the city is the solution, not the problem.

“Smart” city is a necessity. A city that makes conscious efforts to innovatively use of information and communication technologies (ICT) to support a more inclusive, diverse and sustainable urban environment. According to D. Papastergiou (former Mayor of Trikala) “it is the city that “listens” to its citizens and together they proceed to useful projects and actions with “human characteristics”. A city must be sustainable and at the same time “open” to plan and offer services to all of its citizens without exception, without discrimination, so that everyone feels part of it. Sustainable Urban Mobility and Accessibility focuses on the human, as "it is the urban image with an identity, which interacts with the passerby", as T. Vlastos notes. In this context, the Sustainable Urban Mobility Plans (SUMP) are a clear application of sustainable urban change, since they focus on promoting sustainability, regarding urban mobility and improving the quality of life in urban areas.

The former UN Secretary General, Ban Ki-moon declared, "our struggle for global sustainability will be won or lost in the cities”.

Key words: Agenda 2030, sustainable development, smart open and sustainable city, Sustainable Urban Mobility Plans

Thematic Session:

“Digital Technologies and Innovation in Urban Development and Sustainability”

**EVALUATION OF THE LABOUR CITIES LOCATIONS USING
GEOGRAPHIC INFORMATION SYSTEMS BASED ON
POPULATION AND SPATIAL CRITERIA IN KUWAIT**
T02025

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Abstract

Labour cities is a term used to describe residential areas purposely constructed to host a large group of workers of a particular company or employed in a certain sector. In Kuwait, six labour cities are proposed by the government to house the disproportionately large number of expatriate workers in the country. **Objective:** This research evaluates the locations of these proposed labour cities. **Method:** This study describes a framework based on GIS and MCDA that uses multiple population and spatial criteria to assign suitability scores to each of the proposed locations. The criteria weights were derived from interviews with official stakeholders and geospatial data. Separately, Raster data was used to validate the findings of the primary GIS/MCDA model of the study. **Results:** It is found that the most suitable site is South Sabah Al Ahmed with a suitability score of 68%. This was confirmed by raster suitability analysis. **Conclusion:** The findings show that the capacity of the new labour cities is not high enough to significantly drive down population density, traffic congestion and pressure on infrastructure systems in Kuwait, but there should regardless be benefits for population in existing districts.

Keywords: Analytical Hierarchy Process, GIS, Kuwait, Labour Cities, Multi Criteria Decision Analysis.

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INNOVATIVE REGIONAL DEVELOPMENT THROUGH THE RIS3 SMART SPECIALIZATION STRATEGY

T02027

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Abstract

In the Programming Period 2021-27 the new Smart Specialization Strategy or RIS3 Strategy (Research of Innovation Strategy for Smart Specialization) is a comprehensive economic transformation agenda that serves Policy Objective 1 of the European Structural Funds that is "*A smarter Europe through the promotion of innovative and smart economic transformation*". This European development strategy, spatially focused, based on the unique characteristics and means of each country and region, highlights their comparative competitive advantages and promotes the transformation of the regional economy through an Entrepreneurial Discovery Process (EDP).

This paper, on the one hand, presents selected points of the policy for "Smart Specialization 2014-2020" including the results of the primary research conducted in 2014, the initial year of implementation of RIS3 2014-2020. On the other hand, it reports the newest, now reformed and critical elements of RIS3 2021-2027, which comes after the previous one, while it is accompanied by official statistical data and graphs, which gather scientific interest. The EU's interactive digital platform, European & Regional Innovation Scoreboard, regarding the benchmarking and performance trajectory of Greece's regional innovation, both at country and regional level, updated with the latest Eurostat data (June 2023) shows significant improvement of Greece's performance in the field of innovation over time.

Key words: Innovative Regional Development, Innovation, Research, Technology, Entrepreneurial Discovery Process, Smart Specialization, RIS3.

**INTERNET OF THINGS (IoT) AND ITS IMPACT ON THE
DEVELOPMENT OF ENVIRONMENTALLY SUSTAINABLE CITIES:
ASSURING DATA PRIVACY WHILE DEVELOPING
ECO-HEALTHY LIVING**

T02067

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Abstract

Nowadays, the widespread use of new technologies has endorsed the implementation of technologically driven equipment and appliances on a wide variety of common daily activities. Home devices have been increasingly following the example of other devices such as smartphones, going beyond the state of the art, adopting interconnectivity on the level of every single aspect of private life. Devices like ovens, cameras, and refrigerators have been transformed from classical electric home equipment to smart devices, enjoying a more energetic and creative role within the very private sphere of individuals, a “sacred” sphere which until now remained untouched despite the continuously growing use of online activities. This new reality ended up to the creation and ongoing growth of the so-called “Internet of Things (IoT)”. IoT refers to the network of physical objects - “things”- embedded with sensors, software, and other technologies for the purpose of connecting and exchanging data with other devices and systems over the internet. IoT does not simply constitute a form of digitalization of daily life; On the contrary, it adds up a new level of interconnectivity and “online performing”, since the most elementary common activities, as for example the maintenance and consumption of food and water etc.

IoT may be a key factor in implementing new technologies within the frame of open-air cities and for promoting environmentally friendly forms of energy consuming devices.

This technological revolution though, while offering numerous benefits such as enhanced efficiency, automation, and convenience, also raises significant concerns regarding data privacy. One of the primary impacts of IoT on data privacy is the potential for increased surveillance and tracking. The very nature of IoT devices, which communicate continuously and in real time, allows for an unprecedented level of monitoring.

The aim of the paper is to set the fundamental pillars of a protective legal frame regarding to the use of IoT, so that they could fulfil their pivotal role in providing the technologically necessary assets for a continuously growing development of sustainable cities, without harming privacy and individual rights.

Key words: Internet of Things (IoT), sustainable cities, data protection, smart devices, smart cities, privacy protection, human rights

**FUTURE SMART CITY ENVIRONMENT:
INNOVATIVE AIR POLLUTION MONITORING NETWORK USING
INFO KIOSK BENCHES**

T02151

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Abstract

An innovative air pollution monitoring network is presently developed in the densely built urban area of the Attica region, where most anthropogenic activities exist (transportation, residential and industrial sources) resulting in increased gaseous pollutants and particles emissions. Citizens are exposed to high pollutants concentrations, that continue to be recorded and lead to health problems and premature deaths. The official air quality monitoring network in Attica is not dense enough to provide sufficient knowledge and representative measurements for the concentrations experienced by the public. In

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addition, citizens have little or no access to information on the local air quality and consequently, to the actions that people could take in order to improve air quality in their neighborhood and reduce the health impacts. In this respect, five smart air quality stations will be deployed in two different municipalities across the Region. They consist of continuous, low-cost sensors of main pollutants (CO, NOx, O3, PM10, PM2.5) embedded in an info kiosk bench. These benches offer mobile device/tablets charging points, free Wi-Fi service, speakers for conveying messages and special sockets for charging wheelchairs. They use and store solar energy through photovoltaic panels, resulting in the non-production of gaseous pollutants. The interactive kiosks will depict information on the air quality status, on screens, in the form of simplified indicators along with other information with the purpose of raising awareness on the issue and sharing important information on community events, news, weather and public initiatives in various municipalities around Athens.

Keywords: Pollution monitoring, Smart city, Faircity project, kiosk benches.

NAVIGATING THE DIGITAL FRONTIER: SOCIO-ECONOMIC PERSPECTIVES ON THE TRANSFORMATION OF THE TOURISM INDUSTRY IN THE POST-PANDEMIC ERA

T02171

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Abstract

In the contemporary landscape, the tourism industry is undergoing a profound digital transformation, reshaping how businesses operate and how consumers engage with travel services. This study delves into the intricate dynamics of this transformation, placing a particular emphasis on understanding how demographic variables intersect with consumer attitudes and behaviors in the context of digitization. A central research problem addressed herewith is the exploration of consumer preferences across various facets of the travel experience, such as reservation processes, information accessibility, communication dynamics, and privacy considerations.

Moreover, the study endeavors to uncover how demographic factors may moderate these preferences, introducing a layer of intricacy to our comprehension of the impacts of digitalization. The research design employs a robust analytical framework to elucidate the nuanced interplay between demographic variables and consumer responses. Parametric tests, including Independent T-tests for gender-related analyses and one-way ANOVA for age, education, and income assessments, provide a comprehensive examination of the influence of participant demographics. Additionally, a Pearson correlation analysis explores intricate relationships between variables, enriching the depth of our insights. Findings reveal compelling patterns. Gender disparities emerge, with male respondents expressing significantly more positive inclinations toward digital transformation than their female counterparts. Age-based dynamics also come to the forefront, as respondents aged 41-50 and 51+ demonstrate notably more favourable attitudes toward the digital transformation of the tourism sector. Education emerges as a significant factor, with higher educational attainment corresponding to increased agreement on specific aspects of digital transformation. Intriguingly, monthly family income levels do not yield statistically significant differences in responses, indicating a nuanced relationship between income and digital preferences. Moreover, the study emphasizes the need for targeted strategies based on demographic nuances to cater to diverse consumer preferences, laying the groundwork for a more inclusive and adaptive digital tourism landscape.

Key words: Tourism industry; Digital transformation; Consumer preferences; Socioeconomics; Sustainability

**CONSTANTINOS DOXIADIS AND ADRIANO OLIVETTI’S
URBANISM VIS-A-VIS SUSTAINABLE PLANNING: THE EKISTIC
GRID AND THE ROLE OF URBAN SCALE DIGITAL TWINS IN
URBAN PLANNING PRACTICES**

T02184

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Abstract

The paper explores how urban scale digital twins can contribute to sustainable environmental design in urban planning. Urban scale digital twins, which have as a core characteristic the possibility to be updated in real-time thanks to the use of technologies such as big data and artificial intelligence, aim to compare different strategies during the processes of decision-making concerning urban and spatial planning. The paper also relates the contemporary practices of urban planning that are based on the use of advanced technologies such as urban scale digital twins to the urban governance approaches of Constantinos Doxiadis and Adriano Olivetti. Particular emphasis is placed on the analysis of the connections between the concepts of ekistics, and entopia in Doxiadis’s work and circular economy. Another aspect that is examined in the paper is how sustainability can be incorporated in urban governance practices. Doxiadis believed in the potentials of ‘entopia’ instead of utopia or dystopia. According to Doxiadis, architectural or urban design strategies could be characterized as ‘entopian’ if they intend to take into consideration environmental and physical limitations, if they take into account the networks that concern the social aspects of the architectural or urban project under study, as well as if they are based on the intention to take into consideration the dynamic parameters concerning the settlements. Doxiadis conceptualized the so-called ‘ekistic grid’ as a tool aiming to provide architecture and urban planning solutions able to promote ‘entopia’. Doxiadis was convinced that ‘entopian’ architecture and urban planning projects should place particular emphasis on the following five elements and their interconnections: Nature, Man, Society, Shells and Networks. Moreover, special attention is placed on Olivetti’s understanding of urban planning methods as concrete utopias. The paper relates the aforementioned ideas of Doxiadis and Olivetti concerning urban planning strategies to the current debates around urban scale digital twins and their role in enhancing sustainability and circular economy in urban planning.

Keywords: data-driven decision-making, urban scale digital twins, Big Data, sustainability, Smart Cities

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Thematic Session:

“Landscape Protection and Urban Renewal”

**PARTICIPATORY CONSERVATION PLANNING: THE CASE OF
ELEONAS DISTRICT IN ATHENS**

T02173

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Abstract

Considered the "dumping ground" district of modern Athens, one of the most critical areas of the city is the vast area of Elaionas. Its name depicts the original usage of the district in Ancient Athens, which has undergone drastic changes over the years, forming its degraded physiognomy of mostly industrial, shipping, and waste management activities. The area, however, still has several remaining buildings of Historic importance inside, most of them out of use and at risk.

The present paper investigates an ongoing project to create an open-source platform for participatory planning regarding the area of Elaionas, which will incorporate a selected number of documented buildings that represent the status of the district and the proposed conservation plan regarding those buildings. The primary purpose was to provide a holistic survey of the area's buildings for all competent professionals to use in their decision-making process regarding the urban planning evolution of the area.

The documentation of the buildings was initiated by bibliographical research to track the different uses and historical phases of the district, followed by the on-field documentation of the selected buildings during 2023, their typology, structure, and pathology, using a designed digital app for the documentation by the established methodology of HERMeS. After the finalization of the survey, the multi-criteria system of preservation was designed, with the help of selected experts inside organized workshops, to form the critical factors for evaluating the importance of buildings regarding immediate preservation. The list of documented buildings with the designed conservation plan of the ten most crucial buildings was integrated in November of 2023 inside the designed platform as a set of assets for future collective decisions on participatory planning of Elaionas.

Key words: Elaionas, participatory planning, buildings, cultural heritage, conservation, pathology, digital heritage

RE-THINKING ISLANDS AS RESILIENCY INCUBATORS

T02073

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Abstract

Islands, often obscured in the broader urban milieu, are integral components of coastal cities, forming a symbiotic relationship representing a unique paradigm in urban-rural integration. The coexistence of islands and Croatian coastal towns offers an interesting perspective on urban-rural dynamics. In the absence of factors enabling the establishment of island cities, they grew into a functional system of mainland cities (urbo-archipelagos). The dynamic between these distinct but interconnected environments manifests in reciprocal relationship, such as seasonal and daily migrations.

Development of islands is characterized by the clash between the need for services necessary for the normal functioning of contemporary daily life and awareness of spatial values intact by uncontrolled development patterns. A plethora of challenges is observed in islanders' daily life, such as lack of central functions and mobility constraints related to reliance on infrequent maritime transport, leading to weakened demographic vitality. On the other hand, remoteness offers opportunities for sustainability due to preserved traditional practices, environmental qualities, and valuable landscapes. By embracing the principles of green living, islands can serve as an inspiration for the future of coastal cities and guide their development into resilient and environmentally conscious urban existence.

This research investigates the status of sustainability practices in the islands along the coast and proposes strategies to enhance sustainable development. Special attention is given to sustainable mobility solutions, addressing the unique challenges of the island-city interface, striving to maintain and enhance their relationship. The research aims to support the transition into models of sustainability, with the goal of reimagining Croatian islands as resiliency incubators, offering a holistic approach integrating natural environment with urban development.

This paper is based on results of multiannual experience in development of projects and programmes in the field of sustainable development and spatial policies, including participatory planning methods and GIS spatial analysis.

Key words: islands, coastal cities, resiliency incubators, sustainable mobility

ON MILO’ S ISLAND EDGE. DESIGNING WITH THE LANDSCAPE.

T02024

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Abstract

The Presentation features the results of the Blended Intensive Program (BIP)/Erasmus plus workshop, organized by the Athens School of Architecture in collaboration with the Schools of Architecture of Porto, Valencia, Bologna and Zagreb organize an educational program entitled "Designing with Landscape".

The program was implemented in March 2023 on Milos, encouraging the dialogue between architecture and landscape. The natural and man-made environment, natural materials, traditional building methods as well as the natural and cultural landscape which are timeless values of Southern Europe were studied together with the cultural and architectural heritage of the landforms in the Milos island coast.

The island of Milos is known for its ‘*syrmata*’, the small fishermen settlements and their lined up ‘boat houses’ on the shoreline.

Where land and sea meet, small spaces -usually carved into volcanic soil (*toffo*)- are just big enough to contain a boat and the very essentials for a stayover. The owners of boathouses traditionally kept their domiciles up the hill and were using the ‘*syrmata*’ for fishing and short stays.

Studying these primitive spaces on the sea evokes the contemporary condition summerized as “On Edge”, students worked bringing to mind the following states of inhabitation:

- Living ‘inbetween’ as many modern nomads do no matter where they are
- Living precariously, without roots or stability
- The title “On Edge” also refers to climate change and an unforeseen future for shorelines and landscapes. Will this coastline be the same in 2050? Will climate change make the heatwaves so impossible that humans will crave for a permanent contact with the sea?

Students were encouraged to investigate possible outcomes and inhabitation strategies within this framework. The results of this work of the student groups will be presented with the present participation.

Key words: *syrmata*, shore, traditional settlements, climate change

**THESSALY: AN HISTORICAL LANDSCAPE IN DECLINE OR THE
BEGINNING OF A NEW REGIONAL MODEL**

T02070

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Abstract

The paper deals with the landscape of Thessaly. Thessaly is located in the central-eastern part of the mainland of Greece, with a total area of 14,307 km² and a population that constitutes 6.77% of the total population of the country. The region consists of 50% mountainous and semi-mountainous areas and by 50% plains. Its plain is located in the middle part of the region, surrounded by mountains and semi-mountains. Several protected conservation areas belong to Thessaly, of particular ecological and aesthetic value. Since ancient times, the plain was characterized by agricultural land uses, such as the existence of grain cultivation (377 BC). The region includes about 13% of national cultivated areas, its product is ranked second in formation of the country's GDP, while employment in the agricultural sector accounts for 22.9%.

However, as the paper argues Thessaly is a declining landscape. Census data (demographic, economic, environmental) over time from the end of the 19th century until today proves it. In addition, the shift from traditional to intensive mechanized agriculture led to degradation of the rural landscape, simultaneously undermining the rural environment and agricultural biodiversity. The traditional landscape evolved into homogeneous monoculture (cotton cultivation), with the modern increase in inputs and tillage, qualitatively and quantitatively degrading the rural environment and biodiversity. Nowadays, there is another emerging and rapidly developing trend: investment in energy and more specifically in photovoltaics, which is reorienting but also laying the foundations for a new landscape, focused on green energy and far away from its heritage.

Keywords: Agricultural sector, Cultural Heritage, Green development, Historical landscape, Thessaly

**URBAN REGENERATION AND CULTURAL LANDSCAPE IN
GREEK CITIES: LESSONS FROM ELEFSINA**

T02157

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Abstract

Population growth, excessive building density, standardized and monotonous modern developments, a loss of public spaces and facilities, improper infrastructure, social isolation, urban poverty, an unsustainable use of resources and climate change are just few of the issues facing a growing number of cities worldwide. In the era of globalization, where all these changes are affecting the image and the feeling of the city, cities are increasingly competing with one another, both nationally and internationally. Globalization makes cities similar in terms of finance, information technology or patterns of modern urban development, while culture and heritage are the resources which will always distinguish them from one another. In this framework, Greek cities have experienced rapid transformation over the past decades. Intense changes have taken place, associated to globalization and economic crisis that the country faced especially from 2010 and then. Most of the cities, show a rich cultural past combined with history; but apart from Athens, nearly none of them has tried to define a strong cultural identity which will be implemented with spatial and strategic planning. Today, as Elefsina has been awarded the title of the European Capital of Culture 2023, along with the cities of Veszprem in Hungary and Timisoara in Romania, there are plenty of actions that will be combined along with the city's current cultural strategy and its history. It is quite interesting to discuss the process of the events of the ECoC along with interventions that took place in the city, and try to define the connection between urban regeneration and changes of the cultural landscape of the city.

Keywords: Cultural Heritage, Urban Conservation, Urban Design, Cultural Landscape, Historic Urban Landscape

Acknowledgments



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**THE LANDSCAPE IN SPATIAL AND DEVELOPMENTAL
PLANNING. CASE STUDY: THE REGION OF EASTERN
MACEDONIA - THRACE.**

T02159

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Abstract

The synergy among Spatial and Developmental Planning contributes to sustainable development. Even though the legislative framework of spatial planning stresses the need for interaction between them, lack of sufficient interplay is recorded. The research seeks to highlight the importance of interplay between the two policies through the Spatial and Developmental Landscape Policy and the good practices implemented in the Region of Eastern Macedonia-Thrace.

The landscape determines the identity of each place during the centuries, affects well-being and the quality of life. It is at the same time an important development resource at national, regional, sub-regional and local scale. The Convention of the European Council for Landscape (European Convention for Landscape) points out the integration of landscape into spatial planning by promoting three guiding pillars: protection, management and planning of landscapes. In Greece, after the ratification of the European Convention, the incorporation of the landscape was launched on the basis of spatial planning at the regional scale as a critical component. This was a key point for starting a comprehensive and integrated spatial policy for the landscape.

The article examines the landscape in the Region of Eastern Macedonia and Thrace and presents the policies and strategic directions which the Regional Spatial Framework sets and the right practices and actions which were applied for its management and protection. In parallel, the research presents the implementation of good practices and actions for the management of the landscape with the provision of financial incentives by the developmental mechanism of the Special Authority for Programme Management "Eastern Macedonia, Thrace".

The article seeks to emphasize the necessity of synergy between Spatial and Developmental Planning and its contribution to the rational management of the landscape and the sustainable development of the Region of Eastern Macedonia - Thrace.

Keywords: Spatial planning, Developmental Planning, Landscape, Regional Spatial Framework, Region of Eastern Macedonia and Thrace

BOOK OF ABSTRACTS

1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

Thematic Session:
“Sustainable Cities”

**ADAPTIVE REUSE VS URBAN RENEWAL APPROACH OF
ABANDONED INDUSTRIAL LOCATIONS - A CASE STUDY OF
SLAVIJA WAREHOUSE LOCATION IN SKOPJE, REPUBLIC OF
NORTH MACEDONIA**

T02111

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Abstract

Forced industrialization and urbanization during socialism led to massive and uncontrolled expansion of urban territory of the city of Skopje. In the absence of real estate market, industrialization resulted in irrational use of urban land, where large portions were allocated to industrial enterprises. The end of socialism and the transition to free market economy triggered various processes of spatial changes in the city, among which, the most evident was the process of deindustrialization. As a result numerous industrial locations, mainly situated within city's urban boundaries, became abandoned and underutilized, and remained as such.

This paper discusses the importance and opportunities of these abandoned industrial locations as significant source of urban land that can be used for new productive and innovative industries, as well as for commercial programs compatible with production. It argues that through the process of adaptive reuse these facilities can accommodate new production programs thus ensuring rational use of urban land and sustainable development and growth of city's economy.

The aim of this paper is to tackle two different urban approaches for reuse of these locations. The first is the concept of urban renewal, achieved through demolishing of existing facilities and building a new one, and the second is the concept of adaptive reuse, achieved through renovation of the existing facilities. Through the case study of the abandoned location of Slavija warehouse in Skopje these two concepts have been challenged. The urban renewal concept, applied for this location in the official urban planning documents with incorporated residential program, vs the adaptive reuse concept, through the urban design for this location made by the research team with the program to accommodate new industries, such as creative industries, non-material production, and/or small artisanal manufacturing.

Key words: Deindustrialisation, Adaptive reuse, Urban renewal, Creative industries, Urban production

A "NEW" NARRATIVE FOR THE "NEOS KOSMOS"

T02100

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Abstract

A narrative for envisioning experimental and alternative interventions with a social sign and terms of sustainability in the Neos Kosmos refugee housing hotspot. Public space is an organic unity that is constantly transformed by socio-political and economic factors, since cities represent a field of experiences, experiences, cultural encounters, historical memory, social transformations and aesthetic osmosis. A field of variability which is subject to continuous mutations according to necessities, activities, practices of the inhabitants, infrastructures and the environment.

The refugee housing in Neos Kosmos (Dorgouti) is an intriguing large-scale housing complex very close to the city centre. An emblematic example of social housing, architectural-urban planning, according to the principles of modernism, developed during the 20th century and at the same time an almost invisible place of decline, disuse, exclusion and degradation. A social field in which the history of the city, the different refugee flows, the memory, the cultural actions meet and intersect. A privileged multi-collective urban environment with unexploited potential very close to the major traffic axis of Syngrou avenue, which connects Athens to the sea, adjacent to important Cultural, Economic, Entertainment and Tourist functions with large free spaces, greenery and very good transport links.

In the central square of "Holocaust of Kalavryta", the student proposals seek a narrative centred on refugee housing that will invent new uses and standard functions for social groups and communities (young people, students, artists, creators). Such narratives will propose radical architectural arrangements based on realized cases and theoretical proposals, so that the Neos Kosmos acquires a different dynamic presence and a recognizable identity. To be a sustainable space for multi-collective activities and creative meetings.

Key words: Narratives, Architectural Design, Public Space, Social Housing.

**ACHIEVING SUSTAINABILITY IN URBAN
COMMUNITIES THROUGH THE IMPLEMENTATION OF THE
CO-DESIGN PROCESS**

T02149

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Abstract

Achieving the goal of "Sustainable Development of Cities and Regions at a global level" is primarily the result of social relations, actions, priorities, and secondarily of technical planning. Therefore, the involvement of local communities in any relevant decision-making and policy-making is a prerequisite for the effectiveness and sustainability of any planning that moves in this direction.

Participatory processes emerged mainly in the second half of the 20th century and adapted to a wide range of issues and policies. Historically, they appear in various forms, from social and market research to the formulation of spatial development policies and spatial planning.

It is a 'bottom-up' logic of governance and is based on the thinking that it is a democratic right of those who influence and are influenced by a decision, to participate in the design process as well as the decision-making processes from the outset. Co-design processes that make visible particular infrastructures tend to build a sense of trust in terms of accountability and transparency. Trust can emerge through the design process, by “making visible”, what is not visible in itself’.

In the context of this publication, we will analyze how and why it is beneficial to apply the co-design process in urban societies, to create sustainable communities, a meaningful understanding of problems that may affect citizens, using decision support practices, and finally the strengthening of social cohesion.

The research outcome is a model that will work as a system, which will suggest creative ways to engage communities, to enhance citizens' sense of ownership and social cohesion through active participation and decision-making in urban sustainable design. This model will be supported by a web-based platform that will offer a space for citizens and stakeholders to co-design in creating sustainable urban environments.

Key words: Co-Design, Sustainability, Community engagement, Problem understanding

TOWARDS A SUSTAINABLE URBAN FUTURE: THE 15-MINUTE CITY APPROACH IN PARIS, FRANCE

T02045

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Abstract

The rapid pace of urbanization worldwide has led to many challenges, from traffic congestion and air pollution to overconsumption of resources and social inequalities. In response to these pressing issues, and with the opportunity given by the two-year reconsideration of everyday life during the recent pandemic, the concept of the "15-Minute City" has emerged as a promising approach to urban development. This abstract explores the key principles and potential benefits of the 15-Minute City, where essential services and amenities are within a 15-minute walk or bike ride from one's home.

This sustainable city development model envisions compact, mixed-use neighbourhoods that prioritize local living, active mobility, and community engagement. By significantly reducing the need for long commutes, the 15-Minute City holds the promise of reducing carbon emissions, traffic congestion, and energy consumption, all of which align with the European strategy towards a greener and more sustainable environment. This approach fosters a sense of place and belonging, promotes social cohesion, and enhances overall well-being.

The 15-Minute City concept has gained traction in recent years, with numerous cities around the world embarking on pilot projects and policy changes to transform their urban landscapes. This paper highlights the strategies and principles that underpin the 15-Minute City specifically on Paris, France, including the creation of pedestrian-friendly environments, the diversification of land use, and the promotion of sustainable transportation options. Furthermore, the abstract explores the potential challenges and barriers that cities may encounter during the transition to this city model, such as infrastructure redevelopment, funding, and community buy-in. The 15-Minute City represents a bold vision for the future of sustainable urban development, one that aims to reshape our cities into healthier, more equitable, and environmentally friendly spaces for current and future generations.

Key words: Sustainable city development, 15-Minute City, Urban transformation, Participation.

**SUSTAINABLE CITIES AND REGIONS IN EUROPEAN UNION
WITH FOCUS IN GREECE AND ATHENS: MAIN RECENT
CHANGES, POLICY RECOMMENDATIONS**

T02048

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Abstract

Object of the paper is the assessment of regions and cities' sustainability in European Union (EU) with focus in Greece and Athens. We will be limited to the sustainable development' main recent changes and challenges for which we will propose adequate policy recommendations.

Sustainability became a global level developmental and territorial concept, so it is expected that it incorporated more or less other concepts; this way, some complicated theoretical schemes including local and regional sustainable development have been created; they are explained in a first part of the paper. This discussion relates to the UN 2030 Agenda for sustainable development which has proposed seventeen (17) Sustainable Development Goals (SDGs), to achieve by 2030. Several appropriate urban / regional sustainability data and indicators are used to assess the achievement of the SDGs; we present and further discuss them, focusing in the EU area.

Next, we briefly consider the major changes in sustainability of EU regions and cities during the last twenty years, we present the corresponding EU policies and discuss their impact.

We then consider similar but more in-depth the respective changes and policies in Greece and Athens. In general lines, a partial progress has been achieved, which is satisfactory only regarding a small number of objectives, while the response to the Community sustainability strategies is moderate.

Policy recommendations at EU level emphasize on the need to make more resources and means available for the implementation of the sustainability strategy in regions and cities; in Greece and Athens comparatively even more resources and means are needed as well as stronger reform interventions that will ensure commitment to sustainability goals.

Key words: sustainability, sustainable regions, sustainable cities, European Union, Greece, Athens

BOOK OF ABSTRACTS

1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

WHY ARE CITIES IMPORTANT TO HEALTH? REVISITING THE ROLE OF HEALTHY CITIES IN ENHANCING QUALITY OF LIFE AND HEALTH PROMOTION

T02185

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Abstract

The presentation focuses on the importance of the role of Healthy Cities. The Healthy Cities approach refers to cities that continuously generate and improve physical and social environments and expand the resources that enable their residents to achieve their full potential and promote health and well-being. Such cities promote physical and mental health and health equity for all residents regardless of social class, gender, age and race-ethnicity, as well as for vulnerable groups, while implementing sustainable development goals. Healthy Cities ensure access to healthy, nutritious and sufficient food by adopting policies that improve the food environment by addressing malnutrition as well as unhealthy diets and lifestyles. They can ensure increased access to safe drinking water and improved sanitation, efficient waste disposal and pollution management. They can contribute by ensuring better housing and by upgrading residential areas by improving consumption and production patterns through measures against air pollutants and by addressing the effects of extreme weather phenomena as well as by eliminating violence and providing safe spaces. Healthy Cities set an example in public health to strive for and achieve changes for the better, tackling inequalities and promoting health and well-being.

Key words: healthy cities; quality of life; health promotion; well-being; health inequalities; access; public health

BOOK OF ABSTRACTS

1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

THE CONTRIBUTION OF THE PORTS OF MESSINA TO THE DEVELOPMENT OF THE ECONOMY OF PELOPONNIS

T02193

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Abstract

The aim of the study is to present the value and functionality of the ports of the major area of Messinia, as these are one of the most important factors of the economy of the whole Peloponesian landline. These ports operate, produce and store great wealth, compared to other ports in the greek territory. But what will greatly boost their efficiency in a high level, will be the creation of an institution that will focus on the presentation of history, navigation and operation of trade routes.

It is true that these ports from ancient times until today have been a crucial hub at economic, social and cultural level. Today, in the surrounding era of knowledge and the acquisition of new methodological tools, such as sustainable development and the green economy, these ports will be a carrier of wealth hoarding. Therefore, today's generation should integrate sustainable development, renewable energy, circular economy and their products into their daily lives.

Key words: Ports, Messina, Peloponnisos, economy development

GREEN BUILDINGS AND SUSTAINABLE DEVELOPMENT

T02194

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Abstract

Green buildings are more than silent towers of sustainability. They serve as dynamic players in our urban landscapes; they shape a future where eco-friendly living and financial wisdom coexist seamlessly. The design and the construction provide an opportunity to use resources more efficiently, while creating healthier and more energy-efficient homes and commercial buildings. The green buildings concept aims to comprehensively minimize the negative impact and maximize the positive impact a building has on its natural environment and human occupants. Thus, green building is not a simple thing. It reduces the hazardous effect which would otherwise impact human health and the environment and thus makes use of eco-friendly materials. It reduces stormwater runoff and the heat island effect.

The construction of green buildings includes actions such as the protection of local flora, the planting of trees or the preservation of existing ones with the aim of creating natural shadows, the collection and use of rainwater, the use of solar panels that convert sunlight directly into electrical energy, the lightly painted walls to not absorb radiation and avoid overheating of the building, the construction of large overhangs that prevent solar radiation during the summer season, and much more.

The aim of this paper is to investigate the contribution of green buildings to the sustainable development of the places which host them. Green buildings in various developed and undeveloped countries of the world are examined as case studies. The paper comes to conclusions, most importantly that although the cost of constructing green buildings may be much higher than that of conventional buildings, operationally they cost much less during their lifetime, which undoubtedly makes them sustainable.

Key words: Green buildings, sustainable development

Pre-organised Special Session:

**“Cultural Resources and Sustainable
Development”**

Organised by Assoc Prof Maria Kouri

**OLIVE HERITAGE AND DEVELOPMENT OF OLEOTOURISM
IN MESSENIA AS A LEVER OF REGIONAL SUSTAINABLE
DEVELOPMENT**

T02071

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Abstract

The olive heritage is a significant element of the identity and cultures of the Mediterranean peoples. Particularly the olive’s diachronic contribution in the landscape, the economy, the social cohesion and cultural life of various local communities in Greece has been stressed by a number of studies. The region of Messenia is renowned for its olive and olive oil production, predominantly of the Koroneiki and PDO Kalamata olive variety, while the centennial “Mother Kalamon” olive tree is a designated natural monument. Messenia is rich in olive landscapes, where traditional cultivation still takes place, while the region’s capital, the city of Kalamata, hosts the headquarters of the Council of Europe’s Routes of the Olive Tree.

Despite an increasing number of oleotourism possibilities offered by different providers, olive tourism in Messenia has not been widely developed or marketed, yet. This paper examines the potential of oleotourism to support Messenia’s sustainable development, by capitalising on a fundamental regional economic, environmental, social and cultural resource, namely the olive tree and its heritage. To this end, the olive tourists’ perspectives are explored, analysing the data produced by a quantitative and a qualitative study conducted in 2023 in the framework of the OLIVE4ALL project, as well as pertinent literature. The main findings indicate that olive tourists are mainly people of higher education and age, who yearn for specialised knowledge on various aspects of the olive, production processes and products and strongly prefer hands-on, outdoors activities of a sociable character. Accordingly, the development of olive tourism experiences, tailored to the olive tourists’ expectations, can support the preservation of traditional farming and of relevant intangible heritage practices in olive orchards; complement the producers’ income; economically valorise the olive products; support innovation in tourism and olive production; foster social cohesion and the creation of networks outside the supply chain; and, protect the landscape and the olive orchards’ biodiversity.

Key words: Intangible heritage, oleotourism, Messenia

**SUSTAINABLE DEVELOPMENT IN URBAN ENVIRONMENTS
THROUGH ART EDUCATION**

T02058

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Abstract

Postmodern cities are characterized, among others, by overcrowding, by alienation, and thus, by increasing tensions and frictions. A more humanistic design of urban environments can render contemporary cities more sustainable, particularly when it emphasizes on culture and on the preservation and management of the regional, local and community cultural assets. Nonetheless, such efforts require the cultural appreciation and re-evaluation of the various art forms by citizens, highlighting the significance of art education. Indeed, art education promotes the development of critical and creative thinking, which are necessary skills to address and understand complex issues, concerning cultural consumption and creation in urban environments.

This paper investigates the association of formal art education and cultural appreciation, accentuating the significance of art education in cultural preservation and understanding. It also explores how State art-based Secondary schools in Greece could be used as a vehicle for promoting cultural appreciation and sustainable development. To support our argument for promoting cultural appreciation and sustainable development through art education, we present selected cases of artistic efforts adopted by Greek State art-based Secondary schools to outreach local and wider communities. Our main suggestion pertains to the promotion of participatory art as a good practice for community involvement, as it facilitates the perception and appreciation of cultural development in postmodern urban environments, rendering them more sustainable. In terms of methodology, systematic literature review has been adopted to explore the Greek, European and international paradigm regarding art education and cultural appreciation within a sustainable development framework.

Key words: Art education, Cultural appreciation, Postmodern cities, Sustainable development, Greek State art-based Secondary schools.

BOOK OF ABSTRACTS

1st Open-Air Cities International Conference "Local & Regional Sustainable Development and Urban Reconstruction", Harokopio University of Athens, February 16-18, 2024

PORTUGUESE OLIVE HERITAGE AND "SARAMAGO'S 100 OLIVE TREES": AN INTER- AND MULTIDISCIPLINARY PROJECT WITHIN THE SCOPE OF HIGHER EDUCATION IN TOURISM

T02090

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Portugal's olive heritage is an important and unavoidable resource with high tourism potential for the more sustainable development of territories where this heritage is (or could become) a reality. Its enhancement and future dynamism require future tourism professionals to recognise the importance of this heritage and the opportunities it offers from the point of view of new experiences, activities and tourist facilities.

Therefore, in the context of Tourism training in higher education, a multi- and interdisciplinary project was designed, involving a number of teachers and classes, and various curricular units, within the scope of different higher education courses in the area of Tourism. The aim is to integrate the theme of olive heritage into the contents and curricular objectives of several subjects, enabling research, inventorying and processing of data, contributing to a better understanding of the representativeness of heritage values related to olive growing and how they can be revitalised for tourist use.

The aim is to encourage the use of active teaching practices that stimulate the direct involvement of students in their learning process, creating opportunities for the development of transversal skills in the construction of their knowledge, their autonomy and problem-solving. Given the territorial diversity of Portugal's olive heritage, this project focuses on the "100 Olive Trees of Saramago" project (a boulevard of 100 olive trees, located in Azinhaga do Ribatejo, the birthplace of the Nobel Prize for Literature, José Saramago, in which each of the olive trees is identified with the name of one of the characters created by the writer) and on the PDO (Protected Designation Origin) Ribatejo Olive Oil region.

As well as explaining the structure of this project, the results of the first semester of work (for the 2023/24 school year) are also presented, including the teaching methodologies used, the objectives set and achieved and some of the learning outputs verified.

Key words: Olive heritage, multi-disciplinarity, interdisciplinarity, active teaching practices

BOOK OF ABSTRACTS

1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

INTERGENERATIONAL RESILIENCE AND CULTURAL SUSTAINABILITY: YIELDING MEMORIES IN SOUFLI

T02057

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Abstract

As defined by UNESCO (1987), sustainable development points to an interlocking and/or interreferential relationship among four fundamental dimensions: environment, economy, society, and culture. Since the Industrial Revolution, Western societies have largely tuned in the accelerating modes of the Anthropocene, an era marked by the impact human-induced changes have had on the physical cosmos. At the same time, modernity channels societies into globalized behavioral traits and molds mindsets that deem traditional knowledge as dated, and, thus, redundant. This paper highlights some of the goals of, if not the necessity for, cultural sustainability in the 21st century. Tackling some of the perils of globalization (monoculture, homogeneity, historical amnesia, etc.), cultural sustainability proposes a community-centered approach as the analeptic to the fast-paced dwindling of local (hi)stories. The case study to be discussed retracks the memories and reflections of elderly women-storytellers based in the Northern Greek town, Soufli, who participated in the research project: *Unravelling the Cocoon of Memory: Women’s Narratives of a Fading World*. Funded by the Stavros Niarchos Foundation Public Humanities Initiative in 2022-23, and implemented by the Laboratory of Narrative Research, School of English, Aristotle University of Thessaloniki, the project drew on the basic tenets of the Public Humanities with a view to preserving the intangible, cultural capital still vibrant in the (almost) borderland town of Soufli. The oral histories archived (sonic recordings, podcasts and short films) ensure the resilience and accessibility of a slowly diminishing past. Most importantly, the testimonials collected in the project speak for a shared, historical authority, yield cultural and social traditions to be handed down to the younger generations, and contribute to a sustainable cultural future.

Keywords: Cultural Sustainability, Public Humanities, Intangible Cultural Heritage, Resilience

**PAMISO’S RIVER CULTURAL LANDSCAPE:
A SUSTAINABLE APPROACH**

T02076

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Abstract

The river system of Pamisos is located in the southwestern Peloponnese and more specifically in central Messenia. In its plains, with its rich cultural heritage and important archaeological sites and monuments (ancient Messeni, ancient Thuria, Temple of Pamisos, Sanctuary of Poseidon and the Early Bronze Age Megara in Akovitika etc.), almost half of the population of Messenia lives. Pamisos has been rightly identified as "the Nile of Messenia".

In this paper, Pamisos is treated as a riverine cultural landscape. River landscapes are complex ecological and social systems that are important for the sustainable quality of human life. They provide drinking water, fertile, arable soils valuable for farming and food, and facilitate transport and trade, as well as contribute to the recreation of the populations and communities living in their area. Riverscapes also promote intangible aesthetic and spiritual values and, as cultural landscapes, they have evolved through a long history of human-nature interactions. They are considered 'cultural power factors that shape social and individual identities'.

While the riverine cultural landscape of the Pamisos River is a palimpsest of cultural history and memory, offering multiple cultural and social benefits to the communities adjacent to it, its cultural management has not so far emerged in a unified, synthetic and participatory way, aiming to the sustainable development of it.

The purpose of this paper is to present the cultural landscape of Pamisos river; to explore international best practices of sustainable management of riverine cultural landscapes that could be applied to the case of the cultural landscape of Pamisos, observing necessary adaptations; and, to make some initial suggestions on ways and incentives to motivate stakeholder groups to participate in the sustainable development of the Pamisos landscape, mitigating potential conflicts of interest.

Key words: Pamisos river, cultural landscape, sustainable development

**VISUALIZING ARCHAEOLOGICAL DATA: THE PYLOS
GEOARCHAEOLOGICAL PROGRAM**

T02105

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Abstract

The Pylos Geoarchaeological Program, a five-year research program (2021-2026), realized by the Laboratory of Archaeometry of the University of the Peloponnese and the Ephorate of Antiquities of Messenia focuses on the study of the coastal zone of the northern area of Pylos, Messenia Greece. By employing cutting-edge technology for the documentation and study of the extended area that constitutes a landscape of great historical, archaeological and environmental importance the Program has already produced a vast amount of data that is linked to its spatial component. The development of an informative documentation tool in the form of an application was tailored to serve as an indispensable guide for the research team.

This application integrates a plethora of resources, overlapped to high-definition basemaps derived from orthophotos created throughout the aerial documentation of the study area. The interface allows users to effortlessly navigate through the surveyed areas, with points of interest providing detailed insights into the geological and archaeological features. Spatial accuracy is very high due to the use of GPS GNSS receivers while documenting findings during the walking survey and the use of a state-of-the-art RTK UAV system for the creation of the orthomosaics of the study area (Panagiotidis & Zacharias, 2022).

The application works as a depository and easily searchable database visualizing new data from the research program and published information, archaeological, environmental, etc. from previous studies. Interactable points of interest, provide access to users to a repository of indicative discoveries, complemented by an extensive collection of publications (Panagiotidis et al., 2019). This seamless accessibility fosters a dynamic platform for researchers to explore and engage with the multi-faceted aspects of the Pylos Geoarchaeological Program.

As the survey progresses, the spatial application evolves into a dynamic narrative, chronologically cataloguing the processes and discoveries that unfold. By integrating state-of-the-art technology with an unwavering commitment to careful documentation, the Geoarchaeological Cultural Route Application stands as a testament to the dedication and innovation driving the Pylos Geoarchaeological Program's mission to unravel the mysteries of this historically significant region (Cosmopoulos, 2016).

Key words: Cultural Heritage, Pylos Geoarchaeological Program, Digital Applications

Acknowledgments: to the “Exceptional Laboratory Practices in Cultural Heritage: Upgrading Infrastructure and Extending Research Perspectives of the Laboratory of Archaeometry”, a co-financed by Greece and the European Union project under the auspices of the program “Competitiveness, Entrepreneurship and Innovation” NSRF 2014-2020 under which this research is implemented.

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Pre-organised Special Session:

**“Immigrant-Minority Groups and Crisis
Management Policies”**

Organised by Lecturer Maria Vlachadi

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1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

THE ISSUE OF IMMIGRANT-REFUGEE CRISIS AND MANAGING POLICIES: FIELD RESEARCH

T02026

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Abstract

Greece is one of the main gateways for refugees and immigrants from third countries to Europe due to its geographical location at the EU's southeastern border. It is a transcontinental country at the crossroads of Europe, Asia and Africa. The socio-political and economic instability and ongoing conflicts in third countries, especially in the Middle East, have led to a massive population shifting, which our country, as the first host country, is called to manage. The passage of mixed migratory flows from unregulated points of the country's maritime borders has been taking place mainly during the last two decades. In particular, from 2015, due to unfavorable geopolitical developments, this phenomenon has taken on huge dimensions in the eastern Aegean islands. Intense migratory-refugee flows of third-country nationals have entered Europe through the eastern maritime borders and national territorial waters of our country. In the present study, an attempt is made through a field study to investigate particular aspects of the issue of the immigration-refugee crisis and relevant proposals at the level of appropriate and effective management policies.

Key-words: Immigrant-Refugee Crisis, E.U., Managing Policies, Field Research

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1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

SOCIAL SUSTAINABILITY, SOCIAL POLICY AND THE STAKE OF MIGRANTS’ AND REFUGEES’ SOCIAL INCLUSION

T02029

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Abstract

Social sustainability constitutes one of the main theoretical pillars of sustainable development, although it is open to variations in its content and meaning, as there is no universally accepted definition so far. In our analysis, this concept refers to the need for the creation of a society that contains all the conditions for sustainable development in terms of equal opportunities for employment and social well-being. Therefore, social policy that promotes activation and inclusion could become a key determinant of social sustainability. Currently, significant problems and dysfunctions exist as long as several European labour markets (especially of the South) are fragmented with a strong insiders-outsiders divergence, job-polarization, high labour market slack, while in-work poverty rates are particularly high especially in precarious forms of employment and subsequently a new precarity seems to emerge, especially among the youth. Further, severe and multi-parametric socio-economic inequalities affect education, where the inter-generational transition of educational achievement (or even poverty) is evident all across Europe and affects young people’s life chances. All the above-mentioned seem to have a clear impact on migrants’ and refugees’ social inclusion. A major trend that is observed is that refugees, as well as immigrant, tend to be securitized. Preliminary analysis shows that this practice has a direct impact on the precarity of refugees, contradicting an inclusive approach to migration.

In Europe as well as globally, addressing these issues is of major importance in order to ensure social sustainability. Especially after the pandemic, it turns out that the welfare state should operate on the basis of identified needs, effectiveness, efficiency and quality of

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services provided, thus adapting to new changes and challenges, in order to promote social sustainability. The above-mentioned challenges are interrelated with migration policy, especially when it comes to migrants’ and refugees’ social inclusion and subsequently tackling with their existing precarity. The purpose- scope of this contribution is to analyze the state of play regarding social sustainability and the relevant key challenges for the public policy complex, emphasizing migration policy. More specifically, this paper aims at providing the reader with a holistic analysis of the state of play of social sustainability in Europe and aims to identify specific policy responses that could offer viable solutions to old and emerging challenges in terms of social inclusion, within the framework of evidence-based policy making. Further it emphasizes on the issue of migrants’ and refugees’ social inclusion/ precarity and analyses the challengers regarding migration policy, within the framework of a social sustainability-driven approach. The methods used for the above-mentioned analysis are literature review and secondary quantitative analysis.

Key Words: Sustainable Development, Social Sustainability, Welfare State, Employability, Education, Migrants’ and Refugees’ precarity and social inclusion

**CONSTITUTIONAL PROTECTION OF HEALTHY
ENVIRONMENT AND SUSTAINABILITY IN THE HUNGARIAN
CONSTITUTIONAL LAW**

T02075

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Abstract

The normative text of the Fundamental Law of Hungary makes several references to environmental protection. From the National Avowal to the end of the chapter entitled "The State", every section of the Fundamental Law contains its own provisions expressing the country's commitment to environmental values. Our lecture examines these provisions in the context of the practices of the Constitutional Court and of the relevant literature.

From the National Avowal to the end of the chapter entitled "The State", every section of the Fundamental Law contains its own provisions expressing the country's commitment to environmental values.

The Foundation of the Hungarian Fundamental Law is the first section in which environmental protection appears, and it contains the general values, principles and objectives associated with the social order, with Article P) being the first to mention the prominent role of nature conservation.

Following this, environmental protection appears in articles XX and XXI of Freedom and Responsibility, which establishes the fundamental rights. Paragraph (1) of Article XXI establishes the right to a healthy environment in the same manner as the previous Constitution.

Fundamental Law includes the requirement for sustainability.

The Constitutional Court's Decision 16/2015 (VI. 5.) AB declared that the Fundamental Law not only maintained the level of protection of the fundamental constitutional right to a healthy environment, it also contains considerably broader provisions than the Fundamental Law in this area.

Key words: right to healthy environment, environmental protection, sustainability, environmental law, constitution, human rights, Fundamental Law of Hungary

**FROM ISIS TO MAGA: PRO-TRUMP DISINFORMATION
DURING THE TWITTER AFTERMATH OF THE 2017 TERRORIST
ATTACKS IN FIVE MEGACITIES**

T02098

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Elon Musk, the new owner of Twitter since October 27, 2022, and now X, waited less than a month after acquiring the social media company for \$44 billion, to lift Donald Trump’s ban from the platform: "The people have spoken," Musk the promoter of democracy tweeted, saying that 51.8% of more than 15 million Twitter users voted for the ban to be lifted.

Former President Donald Trump was suspended, due to the risk of incitement of violence, after his supporters stormed the US Capitol in Washington DC on 6 January 2021. Twitter is one of the most dominant platforms for political communication, and its prior use by Donald Trump supporters, considering recent historical events is, therefore, of significant interest.

This study critically investigates Twitter discourses on terrorist attacks in *five megacities around the world (Paris, London, St. Petersburg, Manhattan, and Las Vegas)* related to the group ISIS in 2017. The goal is to uncover social media’s integral role in crisis discourses as enablers of societal reactions to disruptive events and developments.

The analysis deploys digital methods on a large Twitter corpus via the tool NodeXL. The analysis is two-fold: on one hand, it screens the networks of the entities participating in the different Twitter discourses; on the other, it maps the semantic networks for a tentative content-/framing analysis of recurring themes and arguments in the respective Twitter content.

Our study finds that the evolution of the populist far/alt right discourse and the development of Trump supporter networks on Twitter coincided with this spate of terrorist attacks, which in turn fed populist alt-right Trump supporters within an environment that enabled users to boost their social media power, discourse, and networks.

Key words: political communication, megacities, terrorist attacks, social media

**THE HEALTH CARE NEEDS OF A RURAL POPULATION
DURING THE COVID 19 ERA. EVIDENCE FROM A MUNICIPALITY
IN CRETE, GREECE.**

T02119

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Abstract

The demographic and social changes taking place in many countries create new vulnerable population groups (elderly, children, immigrants), while on the contrary access to health services is becoming more difficult. Services offered to these groups rarely result from an assessment of real needs and local community engagement. The current cross-sectional study aimed at assessing the health needs of the residents of a rural municipality in Crete during the covid-19 pandemic. A total of 1001 individuals (out of 16780, census 2021) were selected in 2021-2022 via a quota sampling based on the gender, age group and area of residency (500 men, mean age 49.3 years). Results: The majority were married (60.6%) and had an average of 1.7 children. 26.2% were graduates of primary and 22.6% of secondary education, 19.3% were retired and 17.8% reported agriculture as their main occupation. 10.7% reported some form of disability, mainly motor (quadriplegia/paraplegia, etc.) (39%), neurological/rheumatological (14%), and cardiac (13%). The mean age of those disabled was 62.3 years, 79.2% reported moderate functional difficulty and 59.4% severe difficulty. 10.4% needed personal assistance to manage daily living, 32% used an aid (e.g. a crutch), and 4.7% used of a wheelchair. 43.4% had an official disability certification by competent committees. 32% reported a chronic disease, their mean age was 61.9 years and 63.5% of them were monitored by a pathologist, 38% by a rheumatologist, 19.2% by a cardiologist. A total of 39.7% reported consumption of medication in the last 6 months mainly for hypertension (43.3%), diabetes (18.6%), arthritis (9%) and diseases of the circulatory system (8.8%). The average age of those taking medication was 62.3 years. The study emphasizes unmet needs of the population and provides a clear framework of goals for action. Current evidence facilitates rational and efficient allocation of resources.

Key words: health, needs, assessment, rural, municipality, healthcare, utilization

**BURNOUT INCIDENCE DURING PANDEMIC: A CASE STUDY
IN ROMANIAN BUSINESS SECTOR**

T02189

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Abstract

Burnout at work proved to be more acute during the pandemic period (Dimitriu et al., 2020), with severe effects at individual, organizational and global levels. The objective of this case study is to offer an analysis of the burnout syndrome among employees in the Romanian business sector. The data supporting this empirical analysis were collected from a total of 198 employees (N=198) who worked in different Romanian organizations, during the first wave of Covid-19. The main findings following the application of an adapted version of Maslach Burnout Inventory, (Maslach et al., 1996) confirm the analysis of psychometric qualities of a five-dimensional structure model, with effects of the pandemic being perceived in terms of: emotional exhaustion, depersonalization in the relationship with customers, negative self-evaluation, reduced engagement at work as well as limited feelings and experiences of personal achievement. The case study develops the implications for human resource management and offers possible coping and resilience strategies useful in business management in crisis situations.

Keywords: burnout, factorial validity, business management, Romania

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Pre-organised Special Session:

**“Cultural Routes and Sustainable
Development”**

Organised by Assoc Prof Maria Manola

**THE EFFECT OF MUSIC UPON THE RESTAURANT CUSTOMERS’
PERCEPTION AND CHOICE**

T02116

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Abstract

This article is a study of how music can affect the restaurant customers’ perception and in the final point their choices when they come to order. Music is a factor that affects the human brain operation. The human brain has a memory system that through the central almond rates the experiences as positive or negative and their capacity. Those memories lead humans to reconsider each experience as repeatable or non-repeatable. Certain feelings and emotions, under specific conditions that resemble a past situation, dredge memories up and lead to equivalent behaviors. Music is a factor that relates to certain experiences more often, providing the stimulation that the brain needs. The study reconnoiters the influence of the tempo, the genre and the loudness of music as part of the restaurant ambience, as a stimuli that guides the perception based on memory and not on reality.. Music develops specific feelings and emotions based on one’s previous experiences. Those feelings and emotions affect one’s perception and can lead to a different decision compared to situations when the Influence of music is absent. The research that was carried out is scrutinizing the role of music upon affecting the emotional environment and thus the customers’ overall perception of their needs and desires. The alternation of their perception lead to decisions that are not the same under different conditions. The outcome of the study is that music can affect the way we perceive a situation, leading us to a totally different behavior in terms of making a selection from the menu.

Keywords: Music, consumer behavior, perception, choice influence.

**TOURIST ATTRACTION THROUGH ODYSSEY AND ITS
THEATRICAL PLAY IN MODERN GREECE: THE VIEWS OF
CULTURALLY AWARE TOURISTS FROM ATHENS**

T02102

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The works of literature and the messages they carry can influence tourist destination choices, at least for a part of tourists. An author has the power, through his own writings, to make its audience passionate about visiting a place, especially if his or her writings are amongst the most recognized in literature, if they have significant influence in letters and international literature, if they convey true, unanimously shared, global values and messages that excite people’s imagination or if they act as a source of information of cultural patrimony and value.

One such piece of literature whose historical significance, ecumenical character and cultural influence resists in time for more than three millennia, influencing mankind all over the world, is Odyssey. The present article examines if and to what extent Odyssey is a reason attracting tourists in modern Greece and whether some specific to Odyssey activities can be held for tourist attraction purposes. A questionnaire is addressed to culturally aware tourists in places of ancient cultural patrimonies at the city of Athens. The answers come from tourists of different country of origin, sex and educational level. After examining their basic knowledge about Odyssey, tourists are asked if Odyssey has influenced their choice to visit Greece and the places that it refers to, and to what extent performing outdoors some plays of rhapsodies from Odyssey (or the full poem) - in public spaces at the streets of Athens- could attract further tourists in the city of Athens, acting to their entertainment. They are also asked to indicate other means that could possibly help to explore the simultaneous cultural and touristic value of Odyssey.

Key words: Odyssey Cultural tourism Tourist attraction Theatre Literature Sustainable Development

**THE CONTRIBUTION OF THE TRAVELLERS’ TEXTS TO THE
SUSTAINABLE TOURISM DEVELOPMENT OF CRETE**

T02047

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Abstract

This study looks into the intention of tourists visiting the region of Crete, to follow routes that have been taken by travelers of the island during earlier times. Crete is a particularly prominent tourist destination of our country, as it combines in the best way a distinct physiognomic landscape and a cultural background, which displays a continuous timeline, starting from one of the most ancient civilizations, the Minoan one, up to the present day, containing many elements that inspire admiration. Beyond the inexhaustible Cretan nature, though, and the various cultural sites, there are also sophisticated tourist structures that have been proven to be a strong incentive for a visitor.

Thus, as Crete is one of the most important destinations of our country and as literary tourism, a type of tourism perfectly compatible with the EU's proposals to support sustainability, the study focuses on the possibility of exploiting the relevant travel literature.

In order to investigate tourists' intention to follow previously traveled routes, a 20 closed-ended, structured-response questions questionnaire was created and given to 191 adults to fill in. The aforementioned tourists did not belong to any excursion group and were in the city of Heraklion during the period of July 15th - September 15th, 2023. From the preliminary results of the survey, the interest of a significant percentage in highlighting the work of the tourists is evident. In the opinion of the sample, the preservation, processing and promotion of proposals linked to the works of previous travelers can function as tools to strengthen a sustainable tourism product.

Key words: travel texts, Literary tourism, Crete, culture, sustainability

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CROSS-BORDER ENTREPRENEURSHIP WITH A FOCUS ON THE OTTOMAN MONUMENTS OF LESVOS

T02043

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Abstract

Tourism expands roads and builds bridges. In a micro-community level, people have fun and are interested in culture because they feel like they contribute to/ become more aware of their historical national heritage. As mentioned on the Greek Ministry of Culture’s website, there are many monuments on the island of Lesvos, landmarks of cultural heritage, which provide information on the history of a place with a great past. On Lesvos’s map, some of the buildings from the time of the Ottoman Conquest of the island are depicted. Taking into consideration the importance of those monuments, the purpose of this research is to study the perception of a Turkish tourist on their stay in Mytilene as a tourist destination and the first image formed regarding the potential of these Monuments, built for various reasons after the island’s conquest, for tourist exploitation.

In contradiction with Erdogan’s late statement “We may come suddenly one night”, Turkish tourists want to “spend a pleasant night” in the taverns and ouzeri on the island. Thus, although, as a nation, we, seemingly, live under the threat of war, at a local level, Turkish visitors enjoy delicacies of Mytilene, while listening to music originating from Asia Minor, as well as oriental music. The Ottoman Monuments of Lesvos form an important part of the area. This study focuses on the value of preserving and exploiting the cultural past and history associated with the Ottoman Rule on Lesvos and the Ottoman monuments on the island. Are they interested since the monuments are part of their past? How could these monuments be better valued/utilized and displayed, so as to stimulate interest, making them more visible and attractive? There are questions that this study tries to answer through a both.

Key words: cultural itineraries, tourism, Ottoman Monuments, Lesvos. Cross-border , cultural entrepreneurship.

**THE SACRED TRIANGLE OF ANCIENT GREECE:
AN EXPERIENTIAL EDUCATIONAL APPROACH TO CLASSICAL
ARCHITECTURE AS A PARADIGM OF SUSTAINABLE REGIONAL
DEVELOPMENT**

T02038

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Abstract

The Sacred Triangle is a hypothetical architectural masterplan supposedly developed in classical Greece to incorporate three temples (the Temple of Poseidon at Cape Sounion, the Temple of Aphaia on the island of Aegina, and the Temple of Hephaestus on top of the Agoraios Kolonos hill at the Agora of Athens).

The purpose of this supposed sacred design remains obscure and open to scholarly debate. Ancient philosophers and geographers (Aristotle, Strabo, etc.) acknowledge that the sites for these temples were not selected randomly. They abide by an internal and occult methodology, though no ancient source seemed willing to reveal the reason and details of the doctrines or ideas underscoring their construction. Modern scholars continue to debate the Sacred Triangle's existence and pursue methods to understand and highlight the multiple levels of meaning attached to ancient Greek religious sites.

The present paper investigates the potential of the three archaeological sites comprising the traditional Sacred Triangle as pillars of sustainable local and regional development. In the early 21st century, all three temples remain popular tourist destinations, attracting hundreds of thousands of visitors annually. Being close enough to Athens to allow for daily excursions, Cape Sounion and the island of Aegina, in particular, combine attractive natural landscapes with a wealth of historical and mythological associations that enrich the visitor experience and enhance the educational role of these monuments in terms of ancient architecture, mythology, use of resources, and sustainability.

It is clear that the concept of the Sacred Triangle can serve as a catalyst to increase public awareness of these ancient sites on a global scale and become the foundation stone for an experiential educational approach to mobilizing material and immaterial culture in the service of sustainable regional development.

Keywords: Sacred Triangle, Ancient Greece, Education, Tourism, Sustainability

BOOK OF ABSTRACTS

1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

THE LITERARY HAUNTS OF ATHENS AND THEIR SIGNIFICANCE IN THE CULTURAL HERITAGE OF GREECE

T02037

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Abstract

The purpose of this article is to present in a historical retrospective the literary haunts of the past as witnesses of the cultural heritage of ancient Athens. Some of them have been renewed and are preserved to this day, while some others no longer exist. However, to this day they are considered landmarks for the city of Athens and its cultural heritage. The importance of these literary haunts is great not only for the cultural heritage and tradition of Greece but for their utilization for the sustainable development of the city of Athens as places of historical and artistic importance. They are points that have historical significance since they highlight an older Athens, but at the same time they also express a literary path that can be used for the development of the city. In other words, they are important means that can be used with the aim of sustainable development. They can be used in the context of city tourism as well as literary tourism providing multiple resources that can be used in the economic, cultural, touristic and also urban development of Athens. The case of literary haunts is an example of how parts of big cities, as well as the history that accompanies them, can be used positively while also contributing to the preservation of cultural heritage. The writers who were members of these haunts, offered them a place in cultural history and tradition with a long history that is preserved to this day. Therefore, the revival of some of them and the preservation of the rest is of crucial importance.

Keywords: literary haunts, cultural heritage, cities, development

BOOK OF ABSTRACTS

1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

MONASTERIAL MANUSCRIPTS AND THEIR SIGNIFICANCE IN LOCAL DEVELOPMENT AND EDUCATION

T02050

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Abstract

Monasterial manuscripts are part of the cultural heritage of our country. Reading and studying makes the readers travel, among other things, and helps them enrich their knowledge and ideas, while also creating potential visitors. The manuscripts are a cultural legacy that survives over the centuries, related both to religion and its doctrine while, at the same time, having other implications, such as, for example its contribution to the sustainable development of a destination. Monasterial tourism could experience a special flourishing in these areas and is a type of tourism that can be easily developed in Greece, as it is overflowing with many and important points of interest regarding cultural importance and heritage of the aforementioned manuscripts and the relics of Monasteries in general. With the development of tourism, residents care for and seek local development through the cultural history of the area, consumers who use products, internal/external tourists, who are interested to discover religious/cultural routes with experiential activities through travel, as well as the local professionals area looking for ways and knowledge to promote innovative solutions for their businesses. This paper deals with the educational practices, the contribution of the Ministry of Culture and Tourism that could contribute to the promotion and utilization of manuscripts, so that they could become a contributing factor to the development of local society. The paper is also a bibliographic review with a case study of the monastic libraries of Greece.

Keywords: monasterial manuscripts, local development, tourism, cultural heritage.

Pre-organised Special Session:

**“Maritime Spatial Planning, Insular Policies
and Sustainable Development”**

Organized by Prof Stella-Sophia Kyvelou-Chiotini

**REVIEW OF SDG14: IMPLEMENTATION STRATEGIES
AND POLICIES IN EU COUNTRIES FOR SUSTAINABLE
COASTAL/MARINE AREAS AND MARINE LIFE**

T02093

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Abstract

The European Union (EU), with its extensive coastal and marine territories, plays a pivotal role in the global pursuit of Sustainable Development Goal 14 (SDG 14) which aims to "conserve and sustainably use the oceans, seas and marine resources for sustainable development." As the 2030 Agenda for Sustainable Development progresses, there is a compelling need to critically examine the EU's strategies and policies that drive the implementation of SDG 14 to safeguard marine ecosystems, manage resources sustainably, and mitigate human-induced marine degradation. This paper provides an in-depth review of the multifaceted approaches adopted by EU member states in operationalizing SDG 14, focusing on the successes, challenges, and emerging trends in sustaining coastal and marine areas and life.

The proposed methodology entailed a systematic analysis of policy documents, performance reports, and strategic action plans from various EU instruments, including the Marine Strategy Framework Directive, Common Fisheries Policy, and the Integrated Maritime Policy.

Findings indicate that while the EU has made strides in policy integration and cross-sectoral collaboration, significant challenges persist in areas such as overfishing, habitat destruction, and pollution. Moreover, the effectiveness of implementation varies considerably across member states, influenced by economic, social, and political factors. The review also uncovers a growing emphasis on blue economy strategies that seek to balance economic growth with marine conservation.

In conclusion, the paper recommends a reinforced commitment to evidence-based policymaking, enhanced cooperative governance structures, and the scaling of successful local initiatives to a pan-European context. The urgency for action is underscored by the looming deadlines of the 2030 Agenda and the imperative of transitioning towards a more sustainable and resilient blue Europe.

Keywords: SDG 14, EU, Sustainable Coastal Management, Marine Life Conservation, Policy Review, Implementation Strategies

**ASSESSING INTEGRATION OF SOCIO-CULTURAL DATA
IN MARITIME SPATIAL PLANNING: THE CASE STUDY OF KASOS
ISLAND IN SOUTH AEGEAN REGION**

T02084

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Abstract

Maritime Spatial Planning (MSP) is a holistic approach to managing marine activities and resources sustainably. However, implementing MSP in insular and remote areas can be challenging, particularly when addressing social and cultural issues. Social and cultural issues may be integrated into the MSP process through cultural ecosystem services (CES). CES are formally defined as “*the non-material benefits that humans obtain from ecosystems through spiritual enrichment, cognitive development, reflection, recreation, and aesthetic experiences*” (MEA, 2005). In practice, they may signify cultural diversity, cultural heritage values, spiritual and religious values, social knowledge systems and learning values, social relations, inspiration, aesthetic values, regeneration, and a sense of place. This paper explores these challenges through the case study of Kasos Island in the South Aegean Region of Greece, using a participative approach to engage local communities and other local stakeholders’ engagement. Kasos Island provides a wide range of CES. Kasos's cultural ecosystem services are inextricably linked to the island's cultural values. The island's natural environment shapes the islanders' deep connection to the sea, traditional fishing practices, and agricultural heritage. The island's natural beauty and cultural heritage, in turn, provide a foundation for sustainable tourism and economic development. The data collected from a workshop organized on the island can then inform decision-making about sustainable development and natural and cultural heritage conservation. For example, the data is used to identify areas with essential cultural ecosystem services and cultural values and develop strategies for protecting these areas. The data also raise awareness of the importance of CES and cultural values among the broader community and policymakers. The paper will present the data collected and will examine if these are comprehensive, inclusive, and representative of the community's diverse perspectives.

Keywords: Maritime spatial planning (MSP), Cultural Ecosystem Services, social and cultural issues, participatory workshop, local community, Kasos Island, South Aegean Region.

**THE IMPACT OF MICROPLASTICS IN COASTAL AREAS:
A COMPREHENSIVE REVIEW**

T02174

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Abstract

The escalating global production of plastic, coupled with inadequate waste management practices, has led to widespread environmental consequences, particularly the pervasive issue of microplastics. This concern has gained substantial attention within the scientific community due to insufficient exploration of the ramifications of microplastics on ecosystems and human health. Improper disposal of plastic waste in both terrestrial and aquatic environments poses a significant threat to biodiversity and human well-being. Research indicates that a staggering 80% of plastic waste, originally discarded on land, ultimately finds its way into the oceans. This movement is driven by geomorphology, surface runoff, and air masses, facilitating the transport and deposition of plastics in aquatic ecosystems.

The chemical composition of plastic polymers renders them resistant to environmental variables such as temperature and water salinity. However, the relentless action of waves degrades and fragments these polymers, giving rise to smaller particles known as microplastics (MPs). These microscopic plastic particles are easily ingested by marine life, posing a severe threat to their health and initiating the transfer of pollutants through the food chain.

This review paper comprehensively analyzes the multifaceted impacts of microplastics in coastal areas. The accumulation of a substantial quantity of plastics in these regions, exacerbated by their economic dependence on tourism, intensifies the ecological consequences. The study delves into the intricate dynamics of microplastic pollution in coastal ecosystems, shedding light on the interconnected challenges faced by both the environment and local economies. Understanding these impacts is crucial for formulating effective mitigation and management strategies to safeguard coastal ecosystems and ensure sustainable human activities in these vital regions.

Key words: microplastics, production of plastic, coastal areas

**MULTI-USE OF THE MARINE SPACE: THE CASE OF OWFS IN
MSP AND SUSTAINABLE DEVELOPMENT**

T02181

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Abstract

Considering that oceans and seas cover more than 70% of the world’s surface and marine and coastal resources and industries is estimated at approximately 5% of the global GDP (UN, 2017a; CBD, 2016), blue economy turns to become a very important development catalyst of our fast-moving world. Among the traditional activities that are developing at the oceans such as transportation mainly of goods, fisheries and tourism, several new ones, such as renewable energy infrastructure, mining activities and aquaculture (ICSU, 2017), are demanding their share. Furthermore, the preservation of the natural environment is also crucial for the ecosystems’ equilibrium and humans’ wellbeing. Within this context and considering the limitations of the marine space, multi-use concept derives as the optimal solution.

Whilst the Sustainable Development Goal (SDG) 14 promotes the conservation and sustainable use of the oceans, seas and marine resources for sustainable development, the concept, practice and emerging responsible management of maritime spatial planning (MSP) is gaining ground worldwide. However, as pointed out by several researchers, although a regulated management of maritime environment and resources would contribute in all three dimensions of Sustainable development, in several cases even the best applied management practices result to considerable trade-offs (ECESA, 2017, Berggren and Lymer, 2016, GOS, 2017, Kyvelou, 2016), ending up even to contest MSP and associate it with natural capital’s degradation (Kyvelou & Ierapetritis, 2019). However, while competing claims for marine space’s allocation may cause significant conflicts, may also lead to scale economies and brilliant solutions of non-conflicting co-location and “assemblages of uses”.

The present paper investigates the usefulness of multi-use in resolving conflicts between marine uses. Specifically, multi-use settings are considered that include OWFs in coexistence with other sea uses (tourism, fishing etc.). Starting from the state of the art of actual role of OWFs in MSP, this paper will point out some best practices and an atypical SWOT analysis to conclude whether multi-use in MSP can contribute to sustainable development. The study is being supported by a survey carried out through an on-line questionnaire addressed to selected experts and stakeholders. Its results are then being used to extract further conclusions on this regard – including relevant recommendations - and to cover eventual literature gaps.

Key words: Multi-use, MSP, OWFs, conflicts of uses, sustainable development

**INTRODUCING A NOISE FOOTPRINT TOOL TO ASSESS
IMPACTS OF OFFSHORE INFRASTRUCTURES ON
UNDERWATER SOUNDSCAPES**

T02182

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Abstract

The marine and underwater environment, along with the organisms that occupy it, stand as a vital part of the earth's natural capital. Amongst the major stressors affecting the overall quality of the marine environment, human generated noise causes a series of known and yet unknown problems. The cumulative effects of noise from the offshore wind farms installation, oil extraction platforms, and other marine projects remain largely unquantified, hindering efforts to protect marine biodiversity. The protection and monitoring of the marine environment can be achieved with the establishment of marine/underwater quiet areas. Such a concept may be part of the revised Marine Strategy Framework Directive, towards a more efficient ecosystem-based management of the seas and the oceans.

This research introduces a novel approach to quantifying underwater noise pollution by employing the concept of noise footprint, which has previously been used to assess aircraft noise from airports. We introduce a flexible framework for calculating and visualizing noise footprints for individual large marine projects. This framework involves logarithmically adding the noise sources within a project to determine the overall noise magnitude, considering the underwater sound propagation characteristics. The noise footprint will be visualized using the QGIS software, providing a clear representation of the spatial extent of noise attenuation. The application of this noise footprint methodology will enable us to establish underwater quiet areas, designated zones where noise levels are minimized. Quiet areas can serve as valuable refuge for marine life and can be incorporated into marine spatial planning efforts. Additionally, the noise footprint tool will provide decision-makers with a valuable tool for assessing the potential impact of proposed marine projects on underwater soundscapes.

By quantifying underwater noise pollution and identifying quiet areas, we can take steps to mitigate noise impacts on marine ecosystems and promote the conservation of marine biodiversity. The noise footprint methodology offers a promising approach to enhancing our understanding and management of underwater noise pollution in marine environments.

Key words: Marine Strategy Framework Directive, noise, offshore infrastructures, underwater soundscapes, underwater noise footprint

Thematic Session:

**“Climate Change and Sustainable Energy
Issues”**

**DEVELOPING THE REGULATORY FRAMEWORK ON ENERGY
SANDBOXES AS A WAY TO REDUCE THE ENERGY POVERTY
OF THE POPULATION**

T02177

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Abstract

The main problem addressed by the article is the research the mechanism of implementation of actions and measures for mitigate energy vulnerability problem and considerable reducing citizens are suffering energy vulnerability problem.

It may be noted about 57.2% persons in total for the country is in energy poverty by incomes and 12% . The incidence is higher in case of households, with 64.4% of households in energy poverty by incomes and 17.1% .

To align with EU energy policy (Directive (EU) 2023/2413 of 18 October 2023 amending Directive (EU) 2018/2001, Regulation (EU) 2018/1999 and Directive 98/70/EC as regards the promotion of energy from renewable sources) and in compliance with EnC Decisions, it is imperative to establish appropriate rules for the renewables acceleration areas (art.15c lit.(b) of the Directive (EU) 2023/2413).

The introduction of the regulatory sandbox in the energy sector will benefit both innovative Moldovan companies and entrepreneurs wishing to engage in experimental projects, and foreign investors who may be attracted to Moldova by the now more flexible regulatory regime. Incoming foreign investment, in turn, will provide general beneficial effects to Moldovan economy, increasing GDP, creating jobs and raising the level of innovativeness.

The developing of the draft law on Energy Sandboxes is also conditioned by the need to achieve Sustainable Development Goal 7 of the 2030 Global Agenda, focused on access to affordable, reliable, sustainable and modern energy for all and which is nationalized in the National Development Strategy "European Moldova 2030".

Keywords: energy poverty, climate actions, consumers; green deal; green economy; circular; sandbox, vulnerability, renewable

Acknowledgments: This article was developed within the project Chair Jean Monnet on Europeanisation of Moldova through a circular economy that works for consumers / ECOCONS, Grant Agreement number: 101085481 - ECOCONS - ERASMUS-JMO-2022-HEI-TCH-RSCH, implemented with the financial support of the Erasmus + program of the European Union. "The support provided by the European Commission for the development of this publication does not constitute an endorsement of the content, which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein."

SPATIAL GOVERNANCE AND ADAPTATION TO CLIMATE CHANGE. AN APPLICATION TO THE MUNICIPALITY OF PENTELI ATTICA, GREECE.

T02052

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Abstract

Natural disasters are increasing worldwide both in frequency and intensity due to climate change. Urban areas are particularly vulnerable due to their high population density, infrastructure concentration, and socioeconomic complexity. This research aims at understanding the role of spatial governance and engaging stakeholders in adapting to the effects of climate change and reducing the risk of disasters.

At first, the strategies implemented to reduce the risk of disaster were investigated, as well as the guides and measures proposed by international organizations. The Quick Risk Estimation Tool (QRE) was applied to the case study area, the Municipality of Penteli, a tool by the UN for Disaster Risk Reduction (UNDRR) for the Making Cities Resilient Campaign 2030. The tool is an assessment of the risks that threaten the area and the measures/strategies applied to deal with them, based on the Stakeholder's views. The purpose of the tool is a multi-stakeholder engagement process to establish a common understanding and can be used as a guide for the analysis of the region's characteristics, weaknesses, and strengths. The research was conducted using questionnaires and interviews with selected stakeholders of the area.

The results of the research showed that the risks that mainly threaten the area, based on the stakeholders' view, are those of wildfire and snowfall, with those of earthquakes and flood following. A strong differentiation of the stakeholders' opinions, especially in relation to the evaluation of the level of actions and measures that are in place was observed. This fact is attributed to the lack of engagement and participation of the stakeholders in the planning process. The absence of governance principles results in strategies and plans without coordination and coherence, while the gap between citizens and the local administration grows, due to lack of trust and constant questioning.

The conclusions highlight the importance of governance in spatial planning in a framework of transparency and communication and the role of participation in creating a common vision and accomplishing resilience. The use of the QRE Tool in the case of Penteli aimed to raise awareness among stakeholders about the adaptation to natural disasters and to promote risk reduction parameters in planning processes.

Key words: Urban Resilience, Spatial Planning, Disaster Risk Management, Spatial Governance

**PATRAS 2050: THE IMPACT OF CLIMATE CRISIS IN PATRAS
THROUGH CARTOGRAPHIC MAPPING**

T02146

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Abstract

The Mediterranean region is known as a well-balanced system, where changes and transformations occur gradually without affecting life. However, current environmental data cannot confirm this. The IPCC has announced the Mediterranean as one of the most important climate crisis hotspots today. Which means that the Mediterranean cities' landscape will be transformed, if not already being transformed, in ways that are rapid and dynamic.

The paper focuses on the city of Patras and specifically on its coastal front and its historical center. The initial purpose of the research is to highlight the risk of climate impacts in the city according to specific scenarios and to emphasize the gravity of the situation if measures are not taken in the next few years. A parallel objective is to set the urgent need to implement sustainable practices for adaptation to the new reality of the coastal Mediterranean city.

Bibliographic review of theoretical texts on the Mediterranean landscape and recent scientific research on the climate crisis in the geographical unit is used to develop the paper. While, at the same time, cartographic mapping is being conducted to translate the quantitative survey data into their spatial footprint in the landscape of Patras. The documentation of climate threat dynamics through cartographic mappings highlights vulnerable areas of the city and sets the timeframe for the implementation of targeted sustainable practices.

By 2050, the city will face the loss of several public spaces, infrastructures and residential zones near the coastal front. Sea level rise and extreme flooding due to overheating are the main threats on the urban landscape of Patras, which will eventually affect the environment, economy, society and possibly the culture of the extended region.

Keywords: Climate crisis, Patras, impacts, transformation, coastal front, sustainability

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1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

CLIMATE NEUTRALITY PLAN UNTIL 2030 FOR MUNICIPALITY OF IOANNINA, EPIRUS, GREECE

T02160

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BOOK OF ABSTRACTS

1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

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Abstract

Ioannina, a city in the Epirus region of northwestern Greece, stands out for its exceptional biodiversity. With a population of around 130.000, it harmoniously combines its lush natural environment, featuring mountains and water bodies, with a dynamic urban life. The city is a bustling center of various activities, hosting a university, diverse businesses ranging from local shops to major corporations, a distinctive network of silversmith workshops, and sectors in agriculture and poultry farming.

As a committed participant in the European Mission '100 Climate-Neutral and Smart Cities by 2030', Ioannina is on a transformative path towards achieving climate neutrality by 2030. This ambition is propelled by a range of programs and initiatives that promote sustainability in every aspect of city life. A pivotal element of this journey was the creation of a Greenhouse Gas Emissions Baseline Inventory for 2019, which reported emissions totaling 373.647,47 tonnes of CO₂ equivalent across key sectors.

In light of the urgent global climate crisis and the directives of the European Green Deal, Ioannina has embraced a more robust and targeted approach. The city's extended Action Plan aims for a 90.61% reduction in baseline emissions (319.080,82 tonnes of CO₂ equivalent). This Action Plan is the culmination of efforts by the 'Transition Team', a dedicated project group, and reflects the significant contributions of local stakeholders, businesses, and residents. Their thoughts and opinions have been integral in shaping each portfolio of actions, ensuring that the plan resonates with the community's needs and aspirations.

This Action Plan is iterative and adaptable, designed to meet emerging challenges and seize new opportunities while maintaining a clear and focused vision. It details the significant progress made so far, supported by solid data, and outlines the next steps and strategies. These are developed by expert working groups ('Transition Team'), guiding Ioannina towards becoming a model city known for its green practices and sustainable potential.

Key words: Climate Neutrality, 2030 Mission Cities, GHG reductions, Resilient Cities

**NATURAL DISASTERS IN GREECE AND SUSTAINABILITY.
CASE STUDIES FROM THE REGION OF ATTICA.**

T02175

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Abstract

Natural disasters frequently cause adverse effects on the natural and humane environment. The full-scale extent of the damage is the result of the intention of the natural phenomena as well as a variety of other factors that relate to the individual intervention in the natural environment and the imposed policies. To deal with the above phenomena, many countries have committed themselves to immediate measures and the achievement of Sustainable Development Goals.

Initially, the survey refers to the natural disasters that have occurred at the national level in the last five years. Then, the research focuses on Attica and specifically on the areas of Mati and Mandra, where they were affected by natural disasters. A research in situ was carried out in these areas, to assess the factors that contributed to the spread of the fire in Mati and the increase in the intensity of the flood phenomenon in the Mandra area.

The research has shown that in addition to climatic conditions, the human factor plays an important role in increasing the intensity of the phenomena through its interventions in the natural environment. The survey proved that the arbitrariness consists of a compounding factor for the evolution of the phenomena. Thus, the implementation of correct environmental planning plays an important role in the handling of natural disasters. Finally, measures are proposed and policies for the best management and approach to natural disasters, taking into account the objectives of sustainable development for the urban environment.

Key words: Natural disasters, sustainability, Mati and Mandra in region of Attica.

A COMPREHENSIVE EXPLORATION OF BUILDING-INTEGRATED PHOTOVOLTAICS AND URBAN DESIGN STRATEGIES IN LULEÅ, SWEDEN AND LIMASSOL, CYPRUS

T02163

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Abstract

The global concern about climate impact on urban areas and associated energy use is pressing. The structure and design of cities are pivotal in shaping the thermal comfort of public spaces. An avenue to address this is integrating Building-Integrated Photovoltaics (BIPVs), which generate renewable energy but can impact thermal comfort. This study focuses on Luleå, Sweden, and Limassol, Cyprus, examining the BIPV's impact, considering materials, and layouts. The research delves into the complexities, offering insights for sustainable urban development. The primary question is: what is the impact of BIPV - coupled with material and layout choices – on user comfort in public spaces between buildings in these areas? The research novelty lies in its thorough exploration of parameters affecting thermal comfort, encompassing scenarios of active solar system integration and urban layout changes. The aim is to provide urban planners and policymakers with valuable insights for informed decisions, striving for improved thermal comfort in public spaces amid climate change challenges. The investigation into thermal comfort improvement in public spaces is conducted through a parametric study at the city block scale, specifically in Luleå, Sweden, and Limassol, Cyprus. Employing Envi-MET, a microscale urban microclimate simulation tool, eight scenarios for each city are evaluated at three distinct timeframes: morning, noon, and afternoon. The integration of photovoltaics into existing buildings shows minimal positive impact on thermal comfort during the summer solstice. Doubling building height exacerbates discomfort, with photovoltaics providing partial mitigation. Urban layout changes have a slightly more significant impact than photovoltaic integration, but overall, neither factor significantly enhances thermal comfort in the studied urban contexts. In conclusion, the findings suggest that solely integrating photovoltaic panels or altering urban morphology does not notably improve thermal comfort during the summer solstice in the examined cities. Alternative strategies and interventions need consideration for effective enhancement. Further research could explore the combination of parameters like vegetation, shading devices, and building materials to identify more effective strategies for enhancing thermal comfort in urban environments.

Key words: Parametric investigation, Urban design, Sustainability, Building integration, Thermal comfort

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1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

Thematic Session:

“Alternative Tourism - Sustainable Tourism”

**CULTURAL TOURISM PROSPECTS EXAMINED
BY SPACE SYNTAX: THE CASE OF THE HISTORIC CORE
OF SOMBOR, SERBIA**
T02042

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Abstract

The City of Sombor in the northwestern Serbia has the best-preserved historic core among all Serbian medium-sized cities. The almost intact city core has preserved the atmosphere of an early modern Pannonian city from the 18th-19th century. The size of the core is 54 hectares, encircled by a square-outlined boulevard called “Venac”, i.e., Coronet. Many buildings in the core are under state protection, as well as the whole core as an urban ambience.

Nevertheless, Sombor has not gained any significant benefit due to this extraordinary urban cultural heritage. Even more, the city has economically staled for decades, with the typical characteristics of a borderland city in the Danube Region. Since 2000, the city has been shrinking, losing almost 20% of population. This unfavourable socio-economic situation has pressured local authorities and experts to be more open for innovative approaches in urban redevelopment, by promoting and utilising Sombor heritage.

The city was involved in the DANURB+ INTERREG Project, where one of aims is understanding relations between cultural heritage and urban morphology along the Danube, to adequately promote cultural tourism along this big international river. Due to its rich heritage, Sombor was chosen as one of the project pilots for new-type action plans, which main objective is to make a synergy between the mentioned elements by different spatial-research methods. The method of space syntax is presented in paper, as one piece of this “research puzzle”. Practically, the evidence of space syntax study, conducted in the Sombor historic core, is crossed with the spatial analysis of the key sites of cultural heritage important for tourist promotion. Hence, the obtained results are not relevant just for the Sombor case, but also as a contribution of this rarely made theoretical link between space syntax and cultural tourism as a major driver for urban redevelopment.

Keywords: Historic core, space syntax, urban redevelopment, cultural heritage, urban shrinkage, cultural tourism

**PHOTOGRAPHIC TESTIMONIES AS CATALYST FOR
SUSTAINABLE REGIONAL DEVELOPMENT IN ALTERNATIVE
TOURISM: A CASE STUDY OF INACCESSIBLE PANIGIRIA
(FESTIVALS) IN SIFNOS, GREECE**

T02044

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Abstract

In an age dominated by the visual, where the power of photography extends far beyond mere documentation, this research embarks on a profound exploration of its potential in shaping the regional sustainable development within the realm of alternative tourism.

This case study delves into Inaccessible panigiria, a unique facet of Greek traditional religious festivals, renowned for their blend of social, spiritual, and cultural dimensions. Conducted in hard-to-reach churches, panigiria offer a distinctive opportunity for fostering regional sustainable development. Inaccessibility ensures the preservation of pristine paths and a harmonious coexistence of culture and nature. By examining these exceptional events, we aim to highlight how they support regional sustainability and foster alternative tourist experiences, nurtured by the enduring influence of photographic testimonies.

Our methodology featured both qualitative and quantitative approaches. We conducted interviews and we utilized structured questionnaires, which were administered through various methods, including mail, social media, and direct administration. In order to enhance the depth of our findings, we incorporated an extra kind of descriptive research, physical observation, over a three-month period spanning from June 15, 2023, to September 15, 2023. During this time, we also gathered valuable visual evidence. To ensure representative samples, we employed techniques such as random sampling and cluster sampling. This comprehensive research endeavor spanned nearly a year, commencing in August 2022 and concluding in October 2023.

Key findings reveal that photographic testimonies actively bolster regional sustainability and forging connections through cultural, spiritual, and social dimensions, delving into the core of the human experience. This research unearths the profound impact of photographic testimonies, emphasizing their dual role as both storytellers and custodians. They perpetuate a harmonious fusion of tradition, pristine nature, and shared human values - a timeless symphony to be shared with both local residents and foreign visitors.

Key words: photographic testimonies, alternative tourism, sustainability, festivals, Sifnos

**CULTURAL ROUTES AS A FACTOR OF SUSTAINABLE
MANAGEMENT OF CULTURAL RESERVE AND DEVELOPMENT
OF CULTURAL TOURISM**

T02072

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Abstract

Cultural routes are considered as an important tool for the development of urban cultural tourism. The preservation of history and respect for the environment and local communities classify them as alternative forms of tourism. Today, these routes continue to contribute to cultural understanding, sustainable development and preservation of cultural heritage. The utilization of cultural routes has been placed at the center of interest of states in recent years, because it is a tool for spatial development, promotion of areas, support of the local and national economy and promotion of cultural identity. This is where Integrated Territorial Investment comes together. It is a holistic approach to highlighting cultural heritage and diversity, enhancing the attractiveness of areas.

The purpose of this thesis was to gather information on cultural routes as a means of promoting historical and cultural heritage and cultural tourism. The initial objective was to explore the importance of cultural routes in the development of domestic tourism product. An additional objective was to highlight the sustainability of cultural routes through the integration of new technologies.

A quantitative survey was conducted and addressed to those directly involved in the tourism and cultural sector. The questionnaires were collected online. Descriptive and inferential statistics were used for data analysis.

The results of the survey showed that participants agree on the importance of cultural routes in highlighting landmarks. Also, sustainability should be at the core of cultural routes or green cultural routes should be created with a focus on sustainable tourism and environmental protection. Finally, the need to integrate technological tools into cultural routes was underlined in order to make them attractive as a tourist and sustainable product.

Key words: urban cultural tourism, cultural routes, sustainable management, cultural heritage.

PROTECTED AREAS AS A TOOLBOX FOR SUSTAINABLE ECOTOURISM DEVELOPMENT. THE CASE OF PARNITHA.

T02126

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Abstract

The present paper attempts to map the area of sustainable tourism development, focusing on ecotourism in protected areas, the case of Parnitha. Literature shows that "sustainability" should be the future of tourism. The ethical basis of the principle of sustainability is: justice between successive human generations, where each generation, although entitled to satisfy its own needs, must also take into account the needs of future generations when using natural resources. This concept is crucial, since it seeks to prevent or, better still, to prevent the depletion of natural resources. In fact, man, particularly in tourism, has caused significant changes in the flora and fauna of tourist areas. These changes were slow at first and did not pose a risk to the balance of wildlife. Today, however, the rate of extinction of species of flora and fauna is very high, which is why our mapping of the Parnitha National Park as an area of "special natural beauty" shows that: there is an immediate need for protection from illegal logging and land clearing. In fact, from the very first moment of our investigation, the image of the mountainous area of Parnitha does not show characteristics of a protected area, due to intense human intervention in the ecosystems (settlements, landfills, industrial areas, quarries, garbage) etc., so that, in our opinion, management strategies and protection measures, which are mainly applied in the core of the National Park itself, are not implemented.

The focus of this research was, as a cutting edge issue, the sustainable tourism development of Parnitha, through the examination of its particular natural and other characteristics, as well as the possibility of developing ecotourism, based on the principles of protection of a protected area, in such a way that the quality of the natural and cultural environment, as well as local sustainable development, is not undermined.

The participation of the sample is particularly important for the completion of the research, assuring them in advance that: the answers will be considered completely confidential and will be used exclusively for the purposes of the research.

Finally, the perspective on which the analysis and critical commentary of the research of the paper is based maps the field of sustainable tourism development, but focuses on ecotourism of protected areas, as in the case of Parnitha. At the same time, it raises, among other things, environmental questions, concerning epistemological issues and their relationship with the science of sustainable development, and even detects causes that hinder sustainable tourism development and ecotourism, focusing on the Parnitha region.

Keywords: Protected areas, Parnitha, sustainable tourism development, ecotourism, sustainable local development, problems

**ENVIRONMENTAL MANAGEMENT OF NEW ECOTOURISM
AREAS: THE CASE OF MILI GORGE**

T02136

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Abstract

Mili Gorge is a site of the EU Natura 2000 network, located 7 Km from the city of Rethymnon, Crete, which gradually became popular after its renovation in 2014, aiming at serving environmental education, ecotourism and forest recreation activities. Its continuous management for the perpetual offer of its ecosystemic services is considered imperative. The specific research aimed at examining the profile of people visiting the Mili Gorge and whether or not this visit is part of a more environmentally friendly lifestyle. 100 questionnaires were completed on the gorge trail in late June 2021, when the COVID-19 pandemic still affected international travels.

We are pleased to be in a period where citizen and tourists are increasingly interested in environmental conversation. This fact opens up new ways for us to draw up policies that should be consistent with the new ethics for the environment, through the promotion of new ecotourism areas in the context of sustainability, with the multifunctional management of ecosystems as a tool, with the simultaneous active involvement of local communities, with the aim of diffusing tourist flows in the areas and avoiding the unpleasant consequences of mass tourism.

The research shows that visitors are well informed on environmental problems, but they need more incentives from state and local authorities in order to take more actions in trying to solve them. As for the Mili Gorge, the experience of their visit was positive or very positive by 97%, but they also mention some points that need improvement and are described in the present paper. This survey may assist local authorities and businesses to upgrade their services to visitors.

Key words: Environmental Education, Environmental Management, Ecotourism, Mili Gorge

BOOK OF ABSTRACTS

1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

INVESTIGATION OF ACHIEVING SUSTAINABLE DEVELOPMENT OF AGRITOURISM - ECOTOURISM IN THE WIDER AREA OF LAKE KARLA

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This communication deals with the extensive overview research through questionnaires, aiming to explore the opinion of visitors and residents of the wider area of Lake Karla, on the possibility of developing agritourism – ecotourism, under the framework of first author’s PhD Thesis.

A total of 507 questionnaires were collected (257 from visitors and 250 from residents). Through the research, the SWOT analysis of the area was supported, and current conditions have been recorded, in order to take measures to improve the ecological status, while other important parameters were investigated, such as the role of the local government, collective bodies, civil society, as well as the contribution of environmental education towards achieving sustainable development. Through the quantitative and statistical analysis of the questionnaires we thoroughly examined the following research questions: (a) What is the prevailing (current) situation in the wider area of Lake Karla? (b) What measures are considered necessary to improve (and restore) the ecological condition of the area? (c) Under what conditions, the participatory cooperation of the political bodies, the human resources of the local government and the local society, can contribute to the achievement of sustainable development of agritourism - ecotourism in the region? (d) Can environmental education contribute to solving local environmental issues by educating

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citizens for active and effective participation in sustainable development? (e) Are there differences in the preferences of both residents and visitors, depending on their gender, age, monthly income and educational level? Main results and conclusions include, the adoption of forms of alternative tourism such as agro-tourism - eco-tourism, as an important tool for the sustainable development of rural areas and increasing the environmental awareness of residents and visitors, the implementation of bold measures and incentives (financial, social, etc.), on the part of the Local Government and the State, aiming to mitigate the reduction of rural population and to the prevention of young people moving to urban centers and finally, the promotion of Lake Karla, as a Metropolitan node, for the interconnection of the mountainous arc of Kissavos - Mavrovouni - Pelion, which will ecologically and culturally upgrade the wider region.

Key words: *Agritourism, ecotourism, sustainable development, environmental education.*

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1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

Pre-organised Special Session:

“Historic urban conservation approaches”

Organised by Assoc Prof Despina Dimelli

SUSTAINABLE URBAN MOBILITY IN HISTORIC CENTERS

T02176

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Abstract

From the middle of the 20th century, it became clear that the proliferation of motor vehicles affected not only the daily lives of European citizens, but also the shaping of the urban fabric of cities to a large extent. The effects of the rapid spread of motorization on the environment and its influence on the operation of cities were soon realized.

This paper examines the Sustainable Urban Mobility (SUM) policies implemented in recent years to address the issues posed by the transport sector, with an emphasis on the cases of historic centers of European cities and more specifically of Athens.

At the beginning, the theoretical framework on which the concept of Sustainable Urban Mobility is based, is studied through the analysis of all the factors and tools that govern it. Then, the peculiarities of the cases of modern historic cities are reported in terms of the implementation of sustainable mobility practices. Secondly, the historic cities of Barcelona and Bologna are analyzed as case studies. The study is based mostly on the pathogenesis of the pre-existing circulatory system of historic cities, the Sustainable Urban Mobility practices that have been implemented and the results that they have brought.

Finally, special emphasis is given to the mobility of the historic center of Athens. The evolution of the transport sector of the city is studied over time. At the same time the implemented policies in the transport sector are objectively examined and evaluated as well as the future traffic plans of the city are presented.

Key words: SUM, historic centres, Athens, Barcelona, Bologna

URBAN CONSERVATION PRINCIPLES AND HISTORIC URBAN FORMS: THE CASE OF RETHIMNO HISTORIC CENTER

T02148

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Abstract

The historic city is always examined within its wider historical environment. It is increasingly linked to economic, social, cultural, and environmental forces both internal and external to their regional and national boundaries, which lead to their ongoing change and transformations. Urban planning and architecture are part of the general reflection posed by historical conditions, and in this context, urban morphology is directly linked to historic centers. Urban morphology is an area of geographical study that explores patterns of urban form and structure.

The current paper examines the characteristics of the urban morphology of the historic fabric of Rethimno, in terms of historic urban conservation. It analyses the forms that have been structured during the different historic periods (Byzantine, Venetian, Ottoman, modern), and it evaluates their changes until today. It examines the role of spatial planning in urban conservation, and it analyzes the degree of conservation of the historic urban fabric today.

The paper is structured in three main parts. Initially it focuses on the historic periods that have shaped the historic center of Rethimno and it analyzes their spatial forms. It examines the different architectural and urban traces of each period and the combination of elements of different civilizations in the Rethimno historic city. In the second part it evaluates the changes that have diachronically taken place and the degree of conservation of the historic fabric. Finally, in the third part it proposes strategies for the conservation of the historic fabric in terms that will achieve its urban conservation.

Keywords: historic urban conservation, historic urban forms, the historic city of Rethimno, historic urban landscape

**MODERN STRATEGIES OF HISTORIC URBAN CONSERVATION.
THE CASE OF THE OLD TOWN OF NAFPLION.**

T02117

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Abstract

The proposed paper analyses the modern strategies for the protection and promotion of the historical centres in terms of the management of uses, sustainable urban mobility, the network of public open spaces, but also the integration of tourist activity.

It focuses on the historical centre of Nafplion and it proposes strategies and measures for its conservation in terms of the Historic Urban conservation principles. The paper is structured in three parts. In the first part it analyses the urban elements of Nafplion historic centres. It analyses the plans that have diachronically been developed, the land uses and the existing mobility means. It also focuses on the historic fabric morphology and its changes during the last decades. The second part is proceeding to the evaluation of the area's conservation and the needs of the areas visitors and inhabitants as they are reflected in the answers to questionnaires. The third part includes the urban planning proposal, which is based on the theoretical practices of protecting and promoting the historical centres, as well as on good practices that have been applied in the historical centres of European countries, bringing positive results over the centuries.

Key words: Historic urban conservation, Nafplio, urban planning, sustainable mobility, urban morphology

**SUSTAINABLE MOBILITY: A REVIEW OF STRATEGIES
AND ACTIONS IN HISTORICAL CITY CENTERS**

T02169

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Abstract

In the previous century, European cities -including their historical centers- experienced a significant surge in urbanization, placing substantial pressure on the built environment to cater to the increasing needs of the population. This exertion had a direct consequence on the urban landscape, influencing the quality and size of open spaces such as parks, green areas, and archaeological sites, along with their interconnections.

Contemporarily, there is a notable shift in emphasis toward safeguarding and accentuating urban historical centers as repositories of collective historical memory. The imperative for sustainable development within these areas, coupled with seamless integration into the broader urban fabric, is a pivotal concern in contemporary urban planning. An indispensable instrument, in achieving this objective, is the promotion of sustainable and micro- mobility models in and around historic districts.

The European Union (EU) is actively investing in the promotion of well-conceived sustainable mobility strategies within historical centers, providing a wealth of examples and practices. The primary objective of this paper is to elucidate and compare practices related to accessibility, inclusivity, and sustainable mobility within historical districts. The overarching aim is to construct a comprehensive toolbox comprising effective strategies, accompanied by a nuanced categorization delineating the degree of intensity associated with the implemented measures. The paper systematically introduces a spectrum of policies, ranging from more moderate interventions such as prioritizing pedestrian traffic to the more radical measures involving the restriction of vehicular access within historical centers.

Key words: tactical urbanism, historical city centres, sustainable development, resilient planning

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Thematic Session:

“Tourism and Sustainable Development”

**THE DEVELOPMENT OF CLUSTERS AS A FACTOR INFLUENCING
SUSTAINABLE TOURISM IN ARGOLIS**

T02023

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Abstract

This paper aims to explore the necessity for a viable and sustainable operation mode of tourism enterprises in the Regional Unit of Argolis in Greece, through the development of local clusters.

The research is conducted through questionnaires, which are addressed to tourism enterprises of Argolis and through interviews with people in the tourism industry. Through this research are being investigated their perception and attitude regarding the development of local clusters as a factor influencing the competitiveness of the tourism enterprises and the development of Argolis as a sustainable tourist destination.

The tourism enterprises of Argolis and the interviewees are in favor of creating clusters in the tourism sector, as a means of to strengthen the competitiveness of tourism enterprises, with multiplier benefits overall for the Regional Unit of Argolis.

The conduct of the quantitative research with a questionnaire faced limitations in terms of response rate. Extracting information from bibliographic sources and personal interviews contribute to the validity of the research.

The findings on the development of clusters based on the tripartite "Tourism-Culture-Agriculture" are original as they change the existing facts of the sustainability of Argolis as a tourist destination.

The research findings can find practical application in the creation of a tourism cluster, based on cross-sectoral cooperation (primary, secondary and tertiary sector) in the Argolis under the auspices of a Destination Management Organization (DMO) and the operation of a Regional Tourism Observatory.

The connection of clusters in the tourism sector with the competitiveness of tourism enterprises, local development and the sustainability of tourist destinations was chosen as a topic with the aim of formulating proposals for the planning of the tourism policy and development of Argolis.

Keywords: Clusters, sustainable tourism development, tourism enterprises, Regional Unit of Argolis in Greece

**TOURIST PROMOTION OF WETLANDS.
PROTECTION AND EXCLUSION.**

T02040

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Abstract

At the G20 summit in September 2023, leaders expressed their determination to implement the global biodiversity framework in the Kunming-Montreal Agreement and its objectives to protect and "restore" nature. The Kunming-Montreal Agreement on Biodiversity includes key global targets on restoring 30% of the world's degraded ecosystems (land and sea) by 2030 and conserving and managing 30% of areas (terrestrial, coastal and marine areas and inland waters) by 2030.

The interpretation given by each state individually regarding the decisions of the G20 is the one that will determine the course and evolution of the natural landscape, biodiversity and wetlands. In order to achieve these goals, political decisions and education play an important role, which shapes consciousness and social practices. The wetlands of the Peloponnese can and should be included in this category but providing the opportunity through conservation to create the need for protection from the users themselves.

The wetlands of this study contain a common element that unifies them, that of mythology, but this is not enough to activate their visibility and integration into sustainable regional development. The Peloponnese peninsula has fast changes, a good road network and a diverse landscape interest, it also has the elements that form an attractive tourist destination. However, each wetland has a special carrying capacity, which promotes or repels views, initiatives and actions. Tourism in wetlands carries the risk of sustainability and therefore appropriate conditions and conditions must be set so that the site is promoted but at the same time protected.

Cultural value must be ensured through sustainability and fair use. No value is projected guided by isolation, exclusion, and sterile protection. The interaction of man with the environment is what brings the myth to life, conveys information and keeps alive the interest in the wetland.

Key words: Peloponnese wetlands, tourism, regional development, carrying capacity, protection, exclusion, promotion.

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TOURISM AND SUSTAINABLE DEVELOPMENT: THE CASE OF CENTRAL MACEDONIA IN GREECE

T02092

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Abstract

Lots of discussion has been happening worldwide for the need of developing sustainable forms of tourism. Sustainability in tourism procedures can be easily thought as the procedure of the minimization of carbon emissions. But is this what it is all about?

As tourism is an activity which has a clear geographical index it is easily understood that tourism development's impact on the hosting natural environment is prominent. In this way, in tourist developed regions (such as Central Macedonia in Greece), there is a wide alteration of coastal areas which receive all that pressure. This alteration of coastal areas which is mentioned above, it is so harsh as it is accompanied with severe urbanization.

Urbanization taking place in many times is without adequate physical planning and even more it is happening illegally. All that real estate driven process, does not let many chances for sustainable development of tourism.

Development of sustainable forms of tourism as declared by local and regional policies throughout the Southern European coastal regions simply do not take account areas already developed for the sea and sun mass tourism. The latter dominates the Mediterranean countries of Europe and the current research tries to investigate the way policies for the development of sustainable forms of tourism affect the areas which cater for the sea and sun mass tourism. Research mentioned above is concentrated on the region of Central Macedonia in Greece.

Keywords: sustainable forms of tourism, sea and sun mass tourism, coastal areas, Central Macedonia

**TOURIST PORTS AT THE SEAFRONT
OF THE ATHENIAN RIVIERA**

T02099

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Abstract

Tourist Ports and pleasure boats are the two pillars of Yachting. This kind of tourism is addressed to high-level tourism and contributes about 1.5% to the Greek GDP, so is very important for the country's economy. Until now, the Ministry of Tourism supervised tourist ports and categorized them in Marinas, Tourist Shelters and Tourist Moorings. In addition, there are other ports that also provide berths for pleasure boats, including Yachts.

In Greece, 167 Tourist Ports have been allocated (62 marinas, 83 shelters and 22 moorings) but only 102 are in operation, plus 720 other port facilities provide services to pleasure boats. In the Attika Region there are located 10 marinas, 5 Shelters and 1 mooring. Also 108 small ports, not licensed, provide berths for Yachts. Out of these, 8 marinas and 12 small ports are sited at the seafront of the Athenian Riviera (the coastline between Piraeus and Cape Sounion). With the concentration of some of the most prestigious Greek marinas on the seafront of the Athenian Riviera, this area becomes the most developed place for yachting in Greece.

Due to the privatization process, some marinas in the area are under renovation. As a result, fewer berths for bigger boats will be available in the near future. Other ports require investments to ameliorate their services.

This study aims to present all the Tourist Ports in the aforementioned area, with their capacity and potential for development. The evolving market trends, with larger boats, new forms of charters and new legislative acts, are set to alter the current status.

The influence of the tourist ports on the cities behind them and vice versa will be discussed, including benefits to local communities and issues provoked.

Keywords: Tourist Port, Marina, Athenian Riviera

**NOVEL ICT TOOL FOR THE DEVELOPMENT
OF SUSTAINABLE TOURISM**

T02143

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Abstract

Nowadays, it is common accepted that accessibility is a crucial factor to ensure equality, justice and the participation of all individuals in social, economic and cultural activities. Accessibility is not only about people with disabilities, but positively affects all members of society, helping to create more inclusive and fair societies. It can be stated that accessibility becomes essential towards sustainable development, enhancing the role of accessibility in the tourism sector.

The availability of adapted infrastructure allows people to participate in all tourism activities. To that end, accessibility issues help in terms of expanding travel opportunities and lead to economic benefits in the tourism sector.

This work presents a novel ICT tool, that is used for analysis and recording of accessibility issues and problems in various infrastructures in urban environments e.g. sidewalks, buildings, public spaces, etc. with use of features of a GPS navigation system. In the context of the presentation of the novel tool, the main results of infrastructure accessibility mapping in the Municipal District of Platamonas, Prefecture of Pieria are presented.

Key words: Accessibility, ICT tool, Municipal District of Platamonas

SUSTAINABLE TOURISM DEVELOPMENT IN THE DELPHI-THERMOPYLAE AREA, REGION OF CENTRAL GREECE

T02144

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Sustainable tourism strengthens the economic development of rural and mountainous areas and contributes to population retention and attraction. The Region of Central Greece lags in terms of tourism development compared to other Regions of Greece. In parallel, loss of population, low competitiveness levels, poor outcomes in research and innovation, risks from the inability to climate change adaptation and regional cohesion gaps are evidenced. The research focused on a subdivision of the Region of Central Greece, a disadvantaged rural area incorporating Delphi, the Kifissos valley, Thermopylae and their surrounding settlements.

The aim was to explore the perspective of sustainable tourism in the area, focusing on the world-renowned landmarks of culture and history- Delphi and Thermopylae. Untapping the unexploited potential of the area eliminates intra-regional disparities, prevents population loss and contributes to sustainable development on a wider scale.

The methodology included primary qualitative research and a secondary analysis study of the directions of the existing European, national, and regional tourism policy as well as of the Regional Spatial Planning Framework for the Region of Central Greece. The processing and assessment of the area's weaknesses/threats and opportunities/strengths for tourism development lead to conclusions and proposals. They can be implemented through the Smart Specialization Strategy, local and regional development programs, selected initiatives and spatial and urban planning.

Using the place-based approach, the proposed strategy culminates in an integrated tourism development and focuses on a) enhancing connectivity, upgrading infrastructure and public transportation b) diversifying and enriching the tourism product with special and alternative activities networks c) “anchoring” the local tourism value chain to local production and research, through synergies, organized by Research and Innovation “clusters”.

Keywords: integrated tourism policy, spatial planning, new and alternative tourism activities

BOOK OF ABSTRACTS

1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

Thematic Session:

“Society and Sustainable Development”

**DISABLED PEOPLE AND SUSTAINABLE CITIES - A BENEFICIAL
RELATIONSHIP**

T02049

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Abstract

People with disabilities comprise a growing part of the population, and the provided services should be adjusted to their needs to achieve higher quality of life. Access and inclusion to employment, health system, education, transportation, new technologies, and social life are significant issues for disabled people and contribute to sustainability. The 2030 Agenda for Sustainable Development, a critical UN program, contains targets through seventeen Sustainable Development Goals explicitly referencing disabled persons. Cities that provide a friendly environment to disabled people tend to be more sustainable for the benefit of all, which is examined in the current study.

The online focus group technique was applied to collect the required information. Fifteen experts (n=15) from various relevant fields on the examined subject participated in the current study. Thematic analysis of the focus group discussion was also applied. The main findings show that the provision of accessible services and inclusion of disabled people in daily life positively contribute to environmental protection and offer social and economic benefits.

Citizens' awareness, mainly through the education system, contributes to respect for disabled people's rights, facilitating their daily activities and leading to sustainability. Collecting analytical data about those people, level of disability, demographics, needs, and, on the other side, the provided relevant services from public and private organizations is recommended. The trade-off between the costs and benefits of delivering advanced services to disabled people without ignoring the social benefits should be considered.

The use of big data, robots, innovative packaging, and biometrics facilitates the inclusion of those people. Cities providing high-quality services to those people can become more attractive destinations. The small sample of participants and focus on Greek reality limit the generalization of the study's findings. Policy-makers, disabled people and their associations, and academicians can acquire significant insights from the current study.

Key words: Disabled people; sustainable cities; environment protection; social benefits; accessibility; assistive technologies; accessible tourism

**TEACHING EXCELLENCE AS A PREREQUISITE OF INCLUSION:
A LONGITUDINAL STUDY OF FACTORS THAT GUARANTEE
SOCIAL INCLUSION**

T02107

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Abstract

The inclusion of students with special educational needs and/or disabilities has not been achieved so far, since the existing policies are inadequate in providing quality and equal education to all children without exception. (Michailakis, 1997; Landren & Shaeffer, 1999; Fullan, 2001; Lynch, 2001; Eleweke & Rodda, 2002; Peters et al, 2005; MacArthur, 2013; Gaffney, 2014; E.S.A.meA, 2023). The influence of the various disability models, which in turn had a great impact on the respective education policies, has been fragmentary, discontinuous and could not in isolation achieve these children’s inclusion.

Qualitative analysis of 20 interviews with experts and special educational professionals revealed that five intercorrelated factors emerged as the most important quality elements and essential assessment criteria as far as educational and social inclusion was concerned.

Participants in this three year longitudinal study stated that the most crucial predictor of social inclusion was teaching excellence followed by effective leadership, teachers’ education and continuous training, the implementation of the social model of disability and the principles of inclusive education, as well as the implementation of the medical model in education.

This study proposes that policy makers should take into consideration all the above factors, whose dynamic combination can contribute to the social inclusion of students.

Key words: Quality, Inclusive Education, Social Inclusion, Special Educational Needs And Disabilities

Key words: Quality, Inclusive Education, Social Inclusion, Special Educational Needs And Disabilities

**FROM ROADS TO RELATIONSHIPS: STAKEHOLDER
ENGAGEMENT STRATEGIES FOR SOCIAL RESILIENCE IN THE
A14 IMPROVEMENT SCHEME (UK)**

T02115

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Abstract

This paper explores the multifaced nature of stakeholder engagement strategies and their pivotal role in fostering the social resilience. When individuals and communities actively participate in decision-making, they create a strong social connection, which is a cornerstone of social resilience. In times of crisis, communities with robust social networks are better equipped to recover from various disruptions, contributing to the overall resilience of the society.

The specific focus was given to public participation practices and tools, which have been employed within the context of the Nationally Significant Infrastructure Projects in the UK. The A14 improvement scheme from Cambridge to Huntingdon (2014-2019) serves as a case study. The primary objective was to provide the evidence of stakeholder engagement strategies which potentially can prepare communities to face changes. It include the strategies in increasing risk awareness, facilitating effective communication and promoting cooperation, motivation between the different groups of society and people’s empowerment.

The paper takes on the challenge to discusses engagement strategies, which provide a combination of formal and unformal practices. Additionally, the integration of technology enhances the efficiency, outreach of these strategies and feedback mechanisms. The integration of these approaches is identified as a success story for achieving the improved outcomes. Moreover, this paper shows the role of stakeholder engagement in fostering community identity a sense of pride of their surroundings, redefining the significance of places, and creating new values within local communities.

Through the lens of the A14 Road improvement scheme, it becomes evident that a strategic and inclusive approach to engagement can reshape patterns of social relationships and interactions in communities and in the long term contributes to the development of adaptive capacity within a society.

Keywords: citizens engagement; co-creation activities; smart participatory processes, disaster risk reduction, participatory approaches, community resilience.

**SOCIAL INNOVATION AS A FACTOR FOR THE MIGRANTS’
SOCIAL INTEGRATION ON A LOCAL LEVEL**

T02155

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Abstract

Social innovation as a concept has attracted major attention, because it can contribute to the best possible fulfilment of the current social needs through the processes of integration and co-creation with marginalized groups of people. Social innovation can be defined as the development of innovative and effective solutions to social problems, with the intention of meeting vulnerable people’s essential social needs. More specifically, social innovation can be applied in such fields as in the migrants’ social integration, which is an issue of great importance, given the increasing number of migrants in Greece as well as in most European countries.

This paper aims at assessing the stock of social innovation on a social level, focusing on the level of the ‘municipality’. The Region of Attica was selected as a case study and the research intended to explore the extent to which the inhabitants of this region were familiar with the concept and importance of social innovation as well as whether they were informed about the occurrence of social events and interventions organized by local government agents, with the purpose of socially integrating the migrants. For this purpose, a specially designed questionnaire addressed to the inhabitants of this region was implemented. The research was carried out from February to August 2023 and the sample consisted of approximately 2,500 participants.

According to the research results, the majority of the participants have not been aware of the concept of social innovation and have not been informed about the occurrence of socially innovative events in the area where they live. However, despite the limited information over this topic, the participants consider that social innovation can greatly contribute to social innovation and to the migrants’ social integration.

Key words: Social innovation, immigrants, social integration, area of Athens

BOOK OF ABSTRACTS

1st Open-Air Cities International Conference “Local & Regional Sustainable Development and Urban Reconstruction”, Harokopio University of Athens, February 16-18, 2024

THE ENERGY POVERTY PHENOMENON IN GREEK REGIONS

T02085

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Abstract

The role of energy in our lives is very important, as we cover many of our basic daily needs with it. Among other, energy contributes to the improvement of people's quality of life, to economic development and to the well-being of society. However, not all people have access to basic energy services. Exclusion from them, due to inability to cover the energy costs, led to the appearance of the term "energy poverty".

Although there is still no officially agreed definition of energy poverty at the EU and Greek level, different approaches have been developed, with the main ones being the expenditure approach and the consensual.

This paper analyses the phenomenon of energy poverty and outlines its causes and consequences. Through the use of secondary data, the key factors leading to the emergence of energy poverty in Greece, such as GDP per capita, employment, unemployment and disposable income, are presented and compared both over time and at a regional level in Greece.

According to the survey results at the Greek regional level, inequalities can be observed, which vary depending on the respective indicator examined and between the years in question. The conclusions are presented both in tabular and visualised chart form.

The bibliography and internet literature used and on which the paper is based on include sources from books, studies and articles from reputable scientific journals. The statistical data for the comparison of indicators between Greek regions were obtained from the Hellenic Statistical Authority (ELSTAT).

Key words: Energy Poverty, Greek Regions

FRICIONS OF URBANIZATION IN ETHIOPIA: CONVENTIONAL SPATIAL PLANNING VS INDIGENOUS SEFER MAKING

T02053

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Abstract

This study attempts to give an insight into how place-based indigenous processes, through continuous legal and socio-spatial friction, produce urban reality along with the conventional mechanisms of planning. Based on an analytical perspective inspired by theories of urbanization and planning, namely planetary urbanization, self-organization, institutionalist perspectives on spatial planning and urbanization in the global south, the study focuses on the urbanizing context of the lake Tana area. The study backs on an explorative fieldwork to highlight the socio-spatial interventions and actions employed by hegemonic conventional planning and its counter-hegemonic indigenous alternative, Sefer making. An argument is put forward that conventional planning due to its extra-local driving interests, is continuously clashing with localized processes because of its low aptitude for innovative and self-coordinated indigenous actions on the ground, rendering the sustainability of its interventions questionable. The proclamations, directives and spatial plans crafted in the apparatus of conventional planning essentially demonstrate a foreign inspired development trajectory based on knowledge and financial/policy support from extra-local origins. On the other hand, Sefer making actions (indigenous settlement formation), mostly deemed illegal under the shadow of hegemonic interventions, seem to have been cornered as a survival mechanism despite their contextually embedded socio-spatial compatibility. In the processes of Sefer making, households engage in collective actions such as fencing one's own territory, bridging those fences with networks of collaboration for sharing scarce infrastructure, and collectively claiming and appropriating their social space by directly confronting conventional planning interventions. Through elaboration on the processes, interventions and (re)actions, this study calls attention to the line of resistance where the small-scale operations of Sefer making intersect with the large-scale impositions of conventional planning.

Key words: Socio-spatial transformation, Tradition, Institutions, Self-organization, Alternative, Lake Tana

**THE ROLE AND CONTRIBUTION OF SUSTAINABLE LEADERSHIP
IN CONTEMPORARY WORK ENVIRONMENTS**

T02039

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Abstract

In our world, the environmental and social challenges that are constantly arising have led to the need for new leadership models that go beyond existing traditional leadership patterns. Modern leaders have a critical role to play in creating a sustainable society. They are not only called upon to manage challenges, but also to see beyond them and contribute to the design and implementation of long-term, sustainable strategies. Sustainable leadership promotes cooperation and participation of all stakeholders, transparency and accountability in decision-making and highlights its key role in balancing the triple bottom line of economy, society, and environment.

The aim of this article is to highlight the multi-faceted role and contribution of sustainable leadership in today's complex work environments. Furthermore, it will seek to introduce the emergence of this leadership approach not just as an option but as a necessity for contemporary leaders. After analyzing the relevant literature and attempting to define and distinguish the term "sustainable leadership" from traditional leadership models, it is observed that sustainable leadership transcends traditional leadership approaches. Its key characteristics include an emphasis on long-term sustainability, ethical decision making and a strong commitment to environmental and social responsibility.

In today's ever-evolving world, where the challenges of environmental and social sustainability persistently unfold, sustainable leadership emerges as the guiding light that can navigate us towards a more balanced and harmonious future. Modern leaders are bestowed with the responsibility not only to adapt to changes but to proactively shape a resilient society by fostering collaboration, ethical conduct, and ecological and societal stewardship. Hence, as this article delineates, sustainable leadership is no longer a choice but an indispensable cornerstone of leadership in our contemporary era.

Key words: Sustainable development, sustainable leadership, leadership approaches

**COMPARATIVE STUDY OF DRUG CONSUMPTION IN LARGE
URBAN CENTERS AND GREEK PROVINCES**

T02196

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Abstract

The purpose of this paper is to investigate the effect of environmental factors on human health. A bibliographic survey of drug consumption in large urban centers and a Greek province was carried out and a primary survey investigating the effect of environmental factors on human health in the 7 sectors of the Attica region in Greece.

The primary research focuses on the 7 sectors of the Attica region in Greece, Southern Sector, Central Sector, Western Sector, Northern Sector, Piraeus, Eastern Attica, Western Attica which show different degrees of urbanization.

For the needs of the research, a questionnaire was created, which included twenty-nine (29) closed-type structured response questions, was anonymous and was distributed to 457 residents of the Regional Unit of the Southern Sector of Athens, to 449 residents of the Regional Unit of the Northern Sector of Athens, to 96 residents of the Regional Unit of the Western Sector of Athens, to 9 residents of the Western Attica Regional Unit, to 49 residents of the Eastern Attica Regional Unit, to 302 residents of the Piraeus Regional Unit and to 519 residents of the Central Athens Regional Unit. The survey was conducted in the months from March to June 2022.

The questionnaire aimed to record the opinions of the residents of Attica regarding the perceived quality of life in the environment they live in and to identify the variables that affect the quality of life and human health in the urban environment.

The work comes to interesting conclusions regarding the degree of dense population, the existence of green spaces that provide the possibility of sports, the provision of incentives for the mobilization of residents such as for example the existence of bicycle paths, the degree of difficulty of daily movement due to traffic problems or due to an insufficient transportation network, etc. The results were compared with the Regional Unit of the Central Sector of Athens which presents a very high degree of urbanization, and interesting conclusions emerge.

In addition to the main conclusions, the paper proposes ways to improve the environmental conditions and living conditions, in order to normalize the inequalities of the residents in the different sectors of Attica and to reduce the possible effects on their health and the cost of pharmaceutical care for the EOPYY.

Key words: Sectors of the region of Attica, human health, large urban centers, quality of life

Pre-organised Special Session:

“Cities Physiognomy”

Organized by Joseph Stefanou & Roido Mitoula

**THE FORMATION OF THE PHYSIOGNOMY
OF THE MUNICIPALITY OF VYRONAS. THE OPINION OF
RESIDENTS AND VISITORS.**

T02121

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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 Municipality of Vyronas of the Attica Region is chosen.

In order to answer the main questions of the work and to investigate the main factors that shape the physiognomy of the Municipality of Vyronas 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 167 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 Municipality of Vyronas 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 Municipality of Vyronas.

Key words: Physiognomy of the city, sustainable development, the Municipality of Vyronas.

THE FORMATION OF THE PHYSIOGNOMY OF THE CITY OF THIVA. THE OPINION OF RESIDENTS AND VISITORS.

T02128

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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 Thiva 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 Thiva 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 156 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 Thiva 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 Thiva.

Key words: Physiognomy of the city, sustainable development, the city of Thiva

**THE FORMATION OF THE PHYSIOGNOMY OF THE CITY OF
ARTA. THE OPINION OF RESIDENTS AND VISITORS.**

T02134

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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 Arta 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 Arta 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 163 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 Arta 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 Arta.

Key words: Physiognomy of the city, sustainable development, the city Arta.

**THE FORMATION OF THE PHYSIOGNOMY
OF THE CITY OF BERLIN, GERMANY. THE OPINION OF
RESIDENTS AND VISITORS.**

T02062

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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 Berlin, the capital city of Germany, 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 Berlin, 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 11 (eleven) closed-type structured response questions, was anonymous and was 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 61+.

The paper concludes with interesting conclusions and proposals. An important conclusion is that, in order to protect the special physiognomy of the city of Berlin, 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 Berlin.

Key words: Physiognomy of the city, sustainable development, the city of Berlin

THE FORMATION OF THE PHYSIOGNOMY OF THE CITY OF IASI -ROMANIA. THE OPINION OF RESIDENTS AND VISITORS.

T02127

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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 Iasi 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 Iasi 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 152 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 Iasi 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 Iasi.

Key words: Physiognomy of the city, sustainable development, the city of Iasi.

**THE FORMATION OF THE PHYSIOGNOMY OF THE CITY OF
KERATSINI. THE OPINION OF RESIDENTS AND VISITORS.**

T02132

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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 Keratsini 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 Keratsini 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 152 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 Iasi 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 Keratsini.

Key words: Physiognomy of the city, sustainable development, the city Keratsini.

Pre-organised Special Session:

**“Coastal Cities Physiognomy and
sustainability”**

Organized by Joseph Stefanou & Agisilaos Economou

THE FORMATION OF THE PHYSIOGNOMY OF THE ISLAND OF CHIOS. THE OPINION OF RESIDENTS AND VISITORS.

T02120

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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 island of Chios of the North Aegean Region 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 Chios 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 closed-type structured response questions, was anonymous and distributed to 459 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 island of Chios 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 island of Chios.

Key words: Physiognomy of the city, sustainable development, the island of Chios

**THE FORMATION OF THE PHYSIOGNOMY
OF THE CITY OF ALEXANDROUPOLIS. THE OPINION OF
RESIDENTS AND VISITORS.**

T02130

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Abstract

The present paper refers to the physiognomy of the city and is a study was carried out by the Department of Economics and Sustainable Development of Harokopio University of Athens. This study aims to investigate the factors that contribute to the formation of the physiognomy of a city and to examine the opinion of residents and visitors on these issues. As a case study, the city of Alexandroupolis was chosen. In order to answer the main questions of the study and to investigate the main factors that contribute to the physiognomy of the city of Alexandroupolis a survey was carried out and was sent to residents of and visitors to the city.

For the needs of the research, a well-structured questionnaire was designed which included twelve (12) closed-type questions. It was anonymous and distributed to 156 people. The research was carried out between October and November 2023. The questionnaire was sent exclusively to adults. The paper concludes with some interesting conclusions and proposals. An important conclusion is that in order to protect the physiognomy of the city of Alexandroupolis strategies related to the more general protection of all issues related to its sustainable development should be implemented. It is essential both the local government and the businesses of all services and production branches, work towards to the protection and highlighting of the special character of the city of Alexandroupolis.

Key words: Physiognomy of the city, sustainable development, the city of Alexandroupolis.

**ERMOUPOLI, AN OPEN CITY IN A MEDITERRANEAN ISLAND.
THE PHYSIOGNOMY OF THE CITY.**

T02113

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Abstract

In thinking about Ermoupoli, we draw attention to the way that this particular Mediterranean island animates imaginaries and practices of everyday life that have driven in a unique physiognomy of a cosmopolitan and bright city. It's Islandness –a physical and cultural condition– and its history have defined it through the centuries as an “open city” for a big number of Greek islanders and visitors alike, who found there a refuge, granting the city its name (Ermoupolis/city of Hermes), strength, wealth, and power. The city gave them life and they changed it...

The present paper 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 Ermoupolis of the South Aegean region is chosen.

To answer the main questions of the study and to investigate the main factors that shape the physiognomy of Ermoupolis, a survey was carried out, aimed at the residents and visitors of the city. It included open and closed-type structured response questions, and the responses were anonymous. Through our research, and people's testimonies and memories, we highlight the main elements that form the city's physiognomy; data that any future study or action ought to account for when designing or implementing strategies related to the more general protection of all issues related to the city's sustainable development.

Key words: Ermoupoli, Islandness, Islands, cultural heritage, ecological development, Alternative touristic destination.

**SUSTAINABLE PROMOTION OF A CULTURAL ROUTE THROUGH
AUGMENTED REALITY: THE CASE OF THE STEPS OF THE
APOSTLE PAUL
T02088**

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Abstract

The scope of the present paper is the research of the steps of the Apostle Paul in relation to the sustainable impact of augmented reality. It is believed that the particular route is an internationally popular cultural route that runs through urban as well as rural areas. The route is said to be of historical interest to the Orthodox Christians, Catholics, Protestants, and other believers. The period of the Covid-19 made us identify new original solutions so that we could continue our daily life. The use of technology has grown at a rapid pace resulting in the creation of important technological innovations of daily use. This technological framework includes the use of the technological application of augmented reality that contributes to the sustainable management of the tourist flows within and outside cities.

The research method is the quantitative research with qualitative indicators and more specifically the use of questionnaires and interviews. The scope of the paper was to investigate whether the specific technological application that will be presented is considered satisfactory by the visitors-tourists as well as by the local residents and whether it contributes to the sustainable promotion of the specific cultural route.

The results showed that the specific application and the new technology applications are particularly useful for cultural-religious tourism and for the cultural-religious route of the Steps of the Apostle Paul which tends towards its sustainable emergence. An important finding is that a large percentage of traditional religious tourists are familiar with new digital technologies. Moreover, the technological developments in the field of augmented reality are user-friendly and easy to use. Finally, many respondents wish to enrich their entire leisure with short breaks of experiential religious and cultural tourism in a sustainable environment.

From this research, important conclusions are drawn about the sustainable usefulness of digital media in the Steps of the Apostle Paul. With the use of new augmented reality technologies, corresponding problems are addressed and practical solutions are provided.

Key words: Steps of the Apostle Paul, sustainable tourism, augmented reality, digital sustainability

**HIGHLIGHTING THE PHYSIOGNOMY OF ANO SYROS
THROUGH “CREATIVITY”**

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Abstract

According to UNSTAD (2010), "*Creativity can be defined as the process by which ideas are generated, connected and transformed into things that are valued*". R. Caves (2000) believes that the "creative industries" are those that provide goods and services broadly associated with cultural, artistic or simply entertainment values and UNESCO (2021) points out that creativity is the industry of tomorrow.

In this essay we present a series of different creative approaches that seek to contribute to highlighting the physiognomy of the historical ensemble of Ano Syros (Syros Island, Greece) and have been shown in art galleries and conferences. The term "place physiognomy" refers to all its morphological, historical, architectural, cultural and social characteristics, which make it a unique entity. This should be the key in promoting the place, to make it stand out.

Taking as a resource the research conducted during the 9th Interuniversity Seminar on Sustainable Development, Culture and Tradition, of the Syros Institute, on the topic "Landscape: Natural and Cultural Recruitment" and with the aim of highlighting the character of the traditional settlement, a proposal of a spatial and digital cultural route was designed, centred on water, a natural element intertwined with human life and with multiple symbolic dimensions.

Psychogeographical and mental maps, a "literary narrative", digital collages and two videos art were created for promoting the proposal. The one is an art documentary, a wandering in the landscape of Ano Syros on the occasion of the search for the "Pigi ("Source"). In the other, the symbolic meaning of the "Source" is enriched with another dimension, that of the symbol of a new era, in which gender equality will be an undeniable reality.

We aim in a tangible way to make it clear that the "creative industries", on the one hand, can display the physiognomy of a place and, on the other hand, have the potential to contribute to its sustainable development.

Key words: Creativity, Place Physiognomy, Cultural route, Landscape, Water, Ano Syros

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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: the Municipality of KALLITHEA.

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.

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