

# TeMA

Journal of  
Land Use, Mobility and Environment

The climatic, social, economic and health phenomena that have increasingly affected our cities in recent years require the identification and implementation of adaptation actions to improve the resilience of urban systems. The three issues of the 15th volume will collect articles concerning the challenges that the complexity of the phenomena in progress imposes on cities through the adoption of mitigation measures and the commitment to transforming cities into resilient and competitive urban systems.

TeMA is the Journal of Land Use, Mobility and Environment and offers papers with a unified approach to planning, mobility and environmental sustainability. With ANVUR resolution of April 2020, TeMA journal and the articles published from 2016 are included in the A category of scientific journals. From 2015, the articles published on TeMA are included in the Core Collection of Web of Science. It is included in Sparc Europe Seal of Open Access Journals, and the Directory of Open Access Journals.



THE CITY CHALLENGES AND EXTERNAL AGENTS.  
METHODS, TOOLS AND BEST PRACTICES

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## THE CITY CHALLENGES AND EXTERNAL AGENTS. METHODS, TOOLS AND BEST PRACTICES

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The cover image shows a sea glacier ice that melts away.

TeMA. Journal of Land Use, Mobility and Environment offers researches, applications and contributions with a unified approach to planning and mobility and publishes original inter-disciplinary papers on the interaction of transport, land use and environment. Domains include: engineering, planning, modeling, behavior, economics, geography, regional science, sociology, architecture and design, network science and complex systems.

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## Contents

**177** EDITORIAL PREFACE  
Rocco Papa

### FOCUS

**179** **Prioritizing active transport network investment using locational accessibility**  
Bahman Lahoorpoor, Hao Wu, Hema Rayaprolu, David M. Levinson

**193** **Residential development simulation based on learning by agent-based model**  
Hamid Mirzahosseini, Vahid Nofereh, Xia Jin

### LUME (Land Use, Mobility and Environment)

**209** **The Structural Plan's sustainability in coastal areas. A case study in the Tyrrhenian coast of Calabria**  
Lucia Chieffallo, Annunziata Palermo, Maria Francesca Viapiana

**227** **Combining resources and conversion factors**  
Mohammad Azmoodeh, Farshidreza Haghighi, Hamid Motieyan

**249** **Youth urban mobility behaviours in Tunisian Sahel**  
Aymen Ghédira, Mehdi El Kébir

**263** **Renaturalising lands as an adaptation strategy. Towards an integrated water-based design approach**  
Ilaria De Noia, Sara Favargiotti, Alessandra Marzadri

**287 NextGenerationEU in major Italian cities**

Carmela Gargiulo, Nicola Guida, Sabrina Sgambati

EVERGREEN

**307 Trigger urban and regional planning to cope with seismic risks: management, evaluation and mitigation**

Paolo La Greca

REVIEW NOTES

**317 Climate adaptation in the Mediterranean: heat waves**

Carmen Guida

**325 Accelerate urban sustainability through European action, optimization models and decision support tools for energy planning**

Federica Gaglione, David Ania Ayiine-Etigo

**335 Planning for sustainable urban mobility in Southern Europe: insights from Rome and Madrid**

Gennaro Angiello

**341 Sustainable cities and communities: the road towards SDG 11**

Stefano Franco

**345 The interventions of the Italian Recovery and Resilience Plan: Energy efficiency in urban areas**

Sabrina Sgambati

## EDITORIAL PREFACE: TEMA JOURNAL OF LAND USE MOBILITY AND ENVIRONMENT

### The city challenges and external agents. Methods, tools and best practices 2 (2022)

ROCCO PAPA

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The challenge that the complexity of the ongoing phenomena imposes on cities involves not only adopting mitigation measures aimed at reducing the adverse effects of these phenomena; this challenge requires scholars, researchers, technicians, and decision-makers to transform cities into resilient, competitive urban systems rapidly.

The three issues of the 15th volume collect articles concerning the climatic, social, economic and health phenomena that have increasingly affected our cities in recent years and, hence, require the identification and implementation of adaptation actions to improve the resilience of urban systems.

For this Issue, the section "Focus" contains two contributions. The first article of the section titled "Prioritizing active transport network investment using locational accessibility", by Bahman Lahoorpoor, Hao Wu, Hema Rayaprolu and David Levinson (University of Sydney, Australia), explores prioritizing network investment to improve walking and biking access in a suburban area with a poorly connected street network. This study's methods provide a systematic approach to design and prioritizing the potential links to improve active travel in the suburban environment.

The second article, titled "Residential development simulation base on learning by agent-based model" by Hamid Mirzahassein (Imam Khomeini International University, Iran), simulates the sprawls of residential land-use in Qazvin city based on the learning method by agent-based model. For this purpose, a model with the ability to learn from agents has been developed, in which families as agents can interact with each other and learn based on previous decisions.

The section "LUME" (Land Use, Mobility and Environment) contains five contributions. The first is titled "The Structural Plan's sustainability in coastal areas: A case study in the Tyrrhenian coast of Calabria" by Lucia Chieffallo, Annunziata Palermo and Maria Francesca Viapiana (University of Calabria, Italia). This research investigates how general plans can incorporate the specificities of coastal territories, starting from elaborating the knowledge framework to define a sustainable plan project. The authors focus on the Calabrian regional territory, which hosts 10% of the national coastal heritage. The paper presents and discusses the procedural and content aspects related to elaborating the Preliminary Document of the Structural Plan of a municipality located on the coast of the Tyrrhenian Sea to draw general conclusions from local experience useful for planners.

The second article of the section, titled "Combining resources and conversion factors: evaluation of capabilities and social inequities in urban areas by proposing a conceptual framework based on capability approach" by Mohammad Azmoodeh, Farshidreza Haghighi and Hamid Motieyan (Babol Noshirvani University of Technology, Iran), seeks to address challenges related to the conceptualization of capability and proposes a new aggregated framework to draw the connection between Resources, Conversion Factors, and Capabilities as the key terms of the Capability Approach.

The third contribution, titled "Youth urban mobility behaviours in Tunisian Sahel", by Aymen Ghédira and Mehdi El kébir (University of Sousse, Tunisia). The objective of the paper is to be able to draw a portrait of the mobility practices of the youth community in Tunisia and to be the first reference for the travel habits of such demographic group that has been largely forgotten.

The fourth article, titled "Renaturalizing lands as an adaptation strategy. Towards an integrated water-based design approach" by Ilaria De Noia, Sara Favargiotti and Alessandra Marzadri (University of Parma, Italy), proposes a multidisciplinary and transcalar approach that combines landscape design and hydraulic constructions to renaturalize the territory with Green and Blue Infrastructure. The study area of Comano Terme in Trentino offers an opportunity to test an integrated water-based design approach to address the climate crisis

The last paper of the section, titled "NextGenerationEU in major Italian cities" by Carmela Gargiulo, Nicola Guida and Sabrina Sgambati (University of Naples Federico II, Italy), examines the relationships between major cities and the National Recovery and Resilience Plan (NRRP) in the Italian context, firstly highlighting the role of cities in the plan's different phases and then drawing attention to the missions and investments in which the urban dimension is more significant. Furthermore, it highlights how the NRRP goals achievement in cities can lead to higher levels of competitiveness and support the national economic recovery.

Finally, the Evergreen section drawing the attention of the international scientific community to papers that, despite the passing of time, still present elements of significative scientific interest – insights, anticipations and reflections – enough to deserve careful read back. The paper – published in Italian in 1995 with the title "Verso un progetto mirato all'organizzazione e alla gestione di un piano di mitigazione dei rischi sismici" as a contribution in the volume Sanfilippo, E.D. & La Greca, P. (eds), "Piano e Progetto nelle aree a rischio sismico/Planning and design in seismic risk areas", Gangemi Editore, Roma ISBN 88-7448-520-4 – is published again in this section of TeMA Journal, Evergreen, in its literal English translation.

The Review Notes section proposes four insights on the themes of the TeMA Journal. The first section, "Climate adaptation in the Mediterranean: heat waves", by Carmen Guida, highlights the need for integrated action to address the climate crisis in the Mediterranean region, bringing together the strengths and weaknesses of its shores, despite social, economic and political differences.

The second contribution, "Accelerate urban sustainability through European action, optimization models and decision support tools for energy planning", by Federica Gaglione, examines the issue of energy and in particular the energy organization of urban systems and its related components. In the first part, the work describes the optimization models and support tools introduced to improve energy consumption and resource allocation in the various territorial contexts. In the second part, it analyzes the strategies and actions that Europe has developed to have a cognitive and operational framework on the energy planning of urban areas. The third section, "Planning for Sustainable Mobility in Southern Europe", by Gennaro Angiello, provides an overview of the objectives, strategies and actions covered in the sustainable urban mobility plans recently developed by the municipalities of Rome (IT) and Madrid (ES). The fourth contribution, "Sustainable cities and communities: the road towards SDG11", by Stefano Franco, aims at understanding where we are in the path towards SDG11 and the strategies to achieve it. Finally, "The interventions of the Italian Recovery and Resilience Plan: Energy efficiency in urban areas", by Sabrina Sgambati, investigates the topic of energy efficiency within the framework of the Italian Recovery Plan, providing an overview of the proposed strategies, reforms and interventions to improve energy efficiency in Italian cities.