

# 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

1 (2022)

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### **Editorial correspondence**

Laboratory of Land Use Mobility and Environment  
DICEA - Department of Civil, Architectural and Environmental Engineering  
University of Naples "Federico II"  
Piazzale Tecchio, 80  
80125 Naples  
web: [www.tema.unina.it](http://www.tema.unina.it)  
e-mail: [redazione.tema@unina.it](mailto:redazione.tema@unina.it)

The cover image shows redeveloped building in the Garibaldi neighbourhood in the city of Milano (Picture by Fastweb, retrieved from: <https://www.facebook.com/Fastweb/photos/10158794132149472>).

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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## EDITORIAL PREFACE: TEMA JOURNAL OF LAND USE MOBILITY AND ENVIRONMENT 1(2022)

### The city challenges and external agents. Methods, tools and best practices

ROCCO PAPA

DICEA - Department of Civil, Architectural and Environmental Engineering

University of Naples Federico II, Italy

ORCID: <https://orcid.org/0000-0003-3355-1418>

e-mail: [rpapa@unina.it](mailto:rpapa@unina.it)

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 is titled "Multiple components in GHG stock of transport sector: technical improvements for SECAP Baseline Emissions Inventory assessment", by Luigi Santopietro, Francesco Scorza, Beniamino Murgante (University of Basilicata, Italy) focus on the computational approach applied to the transport sector CO<sub>2</sub> emissions assessment in the SECAP Baseline Emissions Inventory (BEI) analysis. The case study of Castelsaraceno Municipality (Italy) highlights the robustness of the proposed approach compared with existing Municipal energy plan evidence and additional checks based on unconventional information sources.

The second article, titled "Mountain tourism facing climate change. Assessing risks and opportunities in the Italian Alps" by Elena Camilla Pedè, Giuliana Barbato, Alessandra Buffa, Marta Ellena, Paola Mercogliano, Guglielmo Ricciardi, Luca Staricco (Fondazione Centro Euro-Mediterraneo sui Cambiamenti Climatici and Politecnico di Torino, Italy), presents a risk methodology to assess the spatial distribution of the main challenges and opportunities for winter and summer tourism due to climate change at the sub-regional level on a 2021-2050 scenario. This methodology has been tested on an Italian Alpine area, which consists of very different landscapes from plain to high mountains.

The section "LUME" (Land Use, Mobility and Environment) contains five contributions. The first is titled "Municipal finance, density, and economic development. Empirical evidence from a global sample of cities" by Marco Kamiya (United Nations Industrial Development Organization, Austria), Raffaele Scuderi ("Kore" University of Enna, Italy), Giuseppe Tesoriere (World Resources Institute, Netherlands). This research focuses on how population density may influence municipal expenditure considering different budget categories, including sanitation, waste, water, affordable housing, and security.

The second article of the section, titled "Mobility infrastructures as public spaces. A reconnection project" by Giulio Giovannoni (University of Firenze, Italy), deals with reconnecting through urban planning public works design, the relationship between mobility infrastructure and spaces for social life.

The third contribution, titled "About non-knowledge in Knowledge management for planning: towards an applied ontological approach", by Maria Rosaria Rossella Stufano Melone, Domenico Camarda (Politecnico di Bari, Italy) highlights reflections on the awareness of how the lack of knowledge and the unknown are important elements to consider during any territorial and environmental planning process.

The fourth article, titled "Sustainable urban regeneration in port-cities. A participatory project for the Genoa waterfront" by Francesca Pirlone, Ilenia Spadaro, Martina Sabattini, Marco De Nicola (University of Genoa, Italy), takes its steps from an in-depth literature study of the definition of urban regeneration, from the analysis

of virtuous international case studies, to arrive to the identification of an approach and key issues to be able to develop a regeneration process that is sustainable and leads to an improvement in quality of life of its inhabitants.

The last paper of the section, titled "Investigation of extreme reflections of metal ceilings and salty soils using object oriented satellite image processing Sentinel-2 L1C using SVM classification method" by Bahram Imani, Jafar Jafarzadeh (University of Mohaghegh Ardabili, Iran), presents a novel remote sensing technique to derive land cover maps from satellite images. The proposed technique is particularly suited for identifying metal roofs since it can distinguish these objects from other high-reflection objects such as salines and dry soils.

The section "Covid-19 vs City-22" collects one papers, titled "A sustainable approach for planning of urban pedestrian routes and footpaths in a pandemic scenario" by Antonio Comi, Francis M. M. Cirianni, Angelo S. Luongo (University of Tor Vergata, Italy). The paper proposes methodology for the classification of pathways, by capacity and level of service, which can be used to verify pedestrian mobility demand for specific measures, strategies, and policies.

The Review Notes section proposes four insights on the themes of the TeMA Journal. The first section, "Climate adaptation in the Mediterranean: where are we?", by Carmen Guida, proposes an insight into the main threats of climate change to the network of Mediterranean cities and discusses why integrated solutions for the whole region are necessary to adapt the Mediterranean region to such phenomena better. The second contribution, "Accelerating sustainable urban transition: European Climate Action", by Federica Gaglione, examines how the transition to urban sustainability requires fundamental and structural changes in urban systems through which challenges such as climate change or the organization of energy systems that are defined on renewable sources are addressed. In this direction, the paper examines the European regulatory excursus starting from the climate law up to the EU Adaptation Strategy to increase the resilience of cities. The third section, "European cities embracing digital nomads", by Gennaro Angiello, provides an overview of the policies and initiatives undertaken by two European cities to attract and retain digital nomads and remote workers: Venice (IT) and Madeira (PT). The fourth contribution, "Sustainable development in cities: a review of frameworks and indexes", by Stefano Franco, clarifies the concept of a sustainable city from a practical point of view by describing some of the most general frameworks in defining urban sustainability. Finally, "The interventions of the Italian Recovery and Resilience Plan: Urban regeneration of the Italian cities", by Sabrina Sgambati, investigates the topic of urban regeneration within the framework of the Italian NRRP, deepening the main strategies, reforms and interventions activated in Italian cities.

The number and extent of the papers published in this Issue did not allow us to propose a scientific article for the Evergreen section, which will certainly find space in future journal issues.