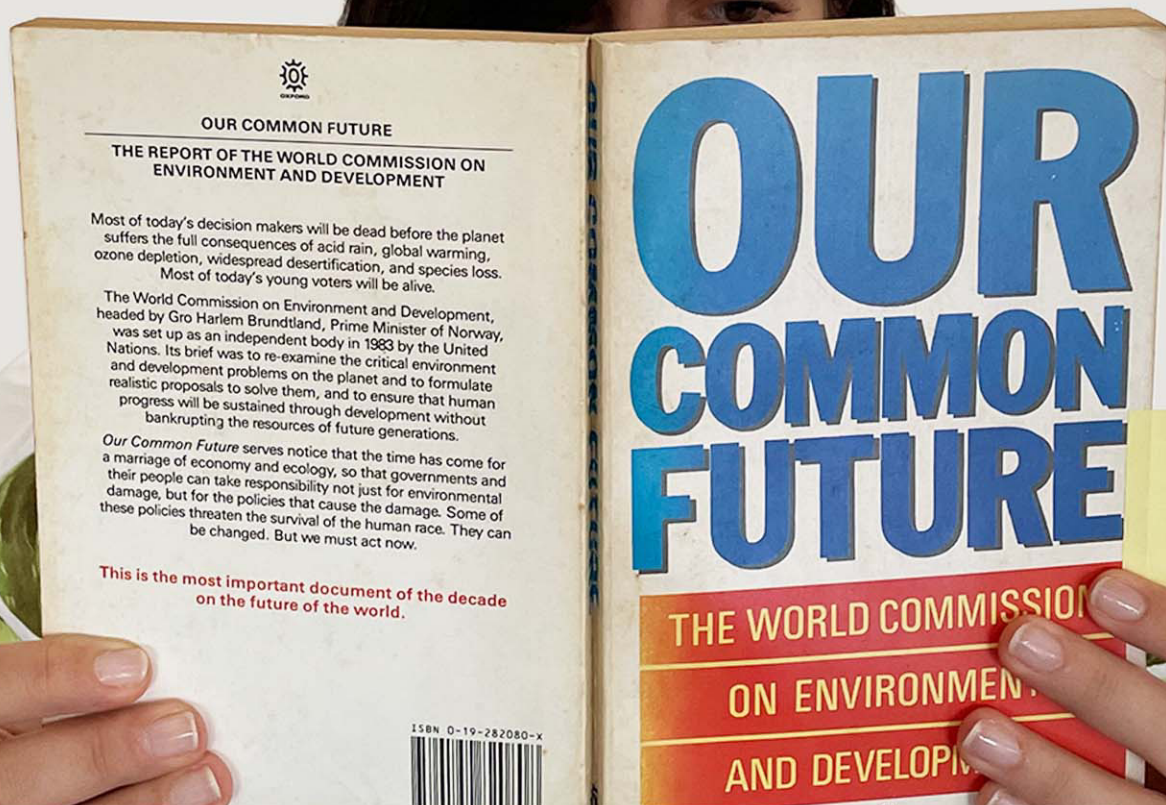


TeMA

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 16th 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 cover image shows a copy of the 1987 UN report "Our Common Future – The report of the world Commission on Environment and Developments". The picture has been taken in TeMA Lab in July 2023. On the bottom, there is a collage made up of four pictures of recent climate disasters (Source: Google images)

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

The city challenges and external agents. Methods, tools and best practices 2 (2023)

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Also, this second issue of the 2023 volume of TeMA Journal focuses on the challenge. The challenge that the complexity of the ongoing phenomena imposes on cities involves adopting mitigation measures aimed at reducing the adverse effects of these phenomena, and at the same time, requires an extraordinary effort from scholars, researchers, technicians, and decision-makers to develop technical methods and operating procedures for transforming cities into resilient, competitive urban systems rapidly. The three issues of the 16th 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 four contributions. The first article, titled "Sustainable mobility for urban regeneration" by Ilenia Spadaro, Chiara Rotelli, Pietro Adinolfi (University of Genova, Italy), proposes a methodological approach was defined which identifies the main phases to follow and the aspects to pay attention in order to achieve a sustainable regeneration of the territory starting from the proposition of sustainable mobility projects.

The second article of the section, titled "Suitable sites for built-up area expansion in Kamalamai municipality, Sindhuli district, Nepal" by Samin Poudel, Shahnawaz Shahnawaz, Him Lal Shrestha, Unigis Kathmandu (UNIGIS Salzburg Kathmandu, Nepal and University of Salzburg, Austria), identifies efficiently the suitable areas for built-up development in Kamalamai municipality (Nepal) using an analytical Hierarchy Process pairwise comparison of Landsat images of 2001, 2016, and 2021 for Land Use Land Cover trend analysis.

The third article, titled "The role of peri-urban agriculture in the pandemic era. Some case-studies compared in Italy" by Donatella Ciladea (University of Molise, Italy), proposes some reflections are made on the new functions of peri-urban agriculture. The author compares the opportunities offered by the European framework with its new tools and the local regional contexts that constitute the Italian panorama.

The last article, titled "Urban open and green spaces: is Malta planning and designing them to increase resilience and sustainability?" by Sarah Scheiber (University of Malta) e Floriana Zucaro (University of Naples Federico II, Italy), focuses on the system of urban open and green spaces whose planning and design, through a systemic approach, can address current and future urban challenges such as climate change. The main aim is to provide local decision-makers with urban open and green spaces planning and design principles based on a mixed-method approach adopting Malta as a case-study.

The section "LUME" (Land Use, Mobility and Environment) contains five articles. The first is titled "Climate change-induced conflicts in Southeast Nigeria and urban food security" by Samuel Okechi Okafor, Sebastian Okechukwu Onah, George Ohabuenyi Abah and Obianuju Oranu Chizoba (University of Nigeria and Lilongwe University of Agriculture and Natural Resources, Malawi), focuses on the necessity of empirically exploring the nexus between climate change-induced conflicts and urban food insecurity in developing nations such as in sub-Saharan Africa.

The second contribution, titled "Nanoparticles measurement on electric, gas, and diesel buses in Bogotá Colombia mass transportation system", by Diego Armando Vargas, Boris Galvis Vanesa Durán Camilo Bernal (Universidad de la Salle, Colombia). The paper aims on the topic of the concentration of traffic-related air pollutants that is relevant in many megacities with high population density, heavy traffic, and prolonged

travel times. The authors compare the nanoparticles measured for diesel, gas, and electric buses during their normal operation in the city of Bogota, Colombia.

The third article, titled "Remote sensing investigation of spatiotemporal land-use changes" by Kulasegaram Partheepan, Muneeb M. Musthafa, and Thangamani Bhavan (Bursa Uludag University, Türkiye), focuses on disastrous environmental and socio-economic consequences related to rapid and haphazard urbanization. The study employed geographic information systems and Landsat imagery from 1979, 2000, and 2021 to look at regional and temporal variations in Batticaloa's land use cover.

The fourth paper, titled "A platform to optimize urban deliveries with e-vans. Dealing with vehicles range and batteries recharge" by Maria Pia Valentinia, Filippo Carrese, Chiara Colombaroni, Valentina Conti, Matteo Corazza, Maria Lelli, Mostafa Mohammadi, Silvia Orchi, Fernando Ortenzi, Golman Rahmanifar, Giuseppe Tomasino, and Gaetano Fusco (University of Rome Sapienza, University of Roma Tre and ENEA, Italy), reports the results of a research targeted to develop a Decision Support System (DSS) for planning and operation of urban deliveries carried out with electric vans.

The fifth article, titled "Evaluation of sustainability of university campuses. The evaluation of Bursa Uludag University Görükle Campus according to UI Green Metric World University Ranking" by Gamze Altun and Murat Zencirkiran (Bursa Uludag University, Turkey), aims to shed light on the progress in the development of the green Bursa Uludag University Görükle Campus (Turkey) to understand the current situation of all initiatives to run a campus that covers sustainability in all its aspects and the upgrade of the campus to a green campus.

The Review Notes section proposes five insights on the themes of the TeMA Journal. The Urban planning practice section of Review Notes, "Energy consumption vs City: The Italian Energy Communities", delves into one of the most discussed strategies to enhance energy performance of cities for the Italian context.

The second section, "Policies and practices to transition towards Renewable Energy Communities in Positive Energy Districts", by Federica Gaglione, focuses its attention on a strongly felt issue in the scientific and political debate to accelerate decarbonization and urban transitions in Europe on Positive Energy Districts (PED). The contribution highlights the critical issues present both in the modeling and simulation of different energy scenarios at district scale that in the unambiguous definition of PED, leaving open the field of existence of the various integrations in the planning processes also due to a still fragmented body of legislation. The third contribution, "New frontiers for sustainable mobility: MaaS (Mobility as a Service)" aims at delving into the issue of sustainable urban mobility through a new mobility paradigm represented by MaaS. It analyzes the potential sustainability benefits of using MaaS in the urban context by citing some interesting and significant journals and books which delved into the topic. The fourth section, "The interventions of the Italian Recovery and Resilience Plan: sustainable development", by Sabrina Sgambati, deals with the topic of sustainable development in urban environments, analysing it in the frame of the Italian National Recovery and Resilience Plan and taking into account the recent projects and initiatives that seek to improve environmental, energy, and infrastructural performance of urban areas. Finally, the fifth section, "Energy transition: pinning down the gaps between theory and practice", by Nicola Guida, focuses on the challenges urban energy planning commonly faces, identifying the gaps between the theoretical scientific progress and their practical implementation.