

# TeMA

Journal of  
Land Use, Mobility and Environment

The Times They Are a-Changin' and cities have to face challenges which may not be further postponed. The three issues of the 13th volume will collect articles concerning the challenges that cities are going to face in the immediate future, providing readings and interpretations of these phenomena and, mostly, methods, tools, technics and innovative practices (climate proof cities, zero consumption cities, car free cities) oriented to gain and keep a new equilibrium between cities and new external agents.

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

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

2 (2020)

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Web source: <https://www.nytimes.com/interactive/2020/03/23/world/coronavirus-great-empty.html>

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.

With ANVUR resolution of April 2020, TeMA Journal and the articles published from 2016 are included in A category of scientific journals. From 2015, the articles published on TeMA are included in the Core Collection of Web of Science. TeMA Journal has also received the *Sparc Europe Seal for Open Access Journals* released by *Scholarly Publishing and Academic Resources Coalition* (SPARC Europe) and the *Directory of Open Access Journals* (DOAJ). TeMA is published under a Creative Commons Attribution 3.0 License and is blind peer reviewed at least by two referees selected among high-profile scientists. TeMA has been published since 2007 and is indexed in the main bibliographical databases and it is present in the catalogues of hundreds of academic and research libraries worldwide.

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# TeMA

Journal of  
Land Use, Mobility and Environment

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

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### Contents

**123** EDITORIAL PREFACE  
Rocco Papa

#### FOCUS

**125** **The Berlin Mobility Lab Flaniermeile Friedrichstraße**  
Stefan Lehmkuhler, Alena Büttner, Claudia Kiso, Marco D. Schaefer

**149** **Urban accessibility: the paradox, the paradigms and the measures. A scientific review**  
Carmen Guida, Matteo Caglioni

**169** **Assessment of Land use/Land cover Changes Linked to Oil and Gas Exploration Developments**  
Mugendi David, Mireri Caleb, Kibwage Jacob, Oyoo Daniel

**191** **An investigation of challenges in the existing pattern of intra-city traffic in Enugu metropolis**  
Ifeanyi F. Echendu, Francis O. Okeke, Rosemary C. Nnaemeka-Okeke

**209** **Back from the future. A backcasting on autonomous vehicles in the real city**  
Luca Staricco, Elisabetta Vitale Brovarone, Jacopo Scudellari

## LUME (Land Use, Mobility and Environment)

- 229 Building strategic scenarios during Covid-19 lockdown**  
Stefania Santoro, Maria Rosaria Stufano Melone, Domenico Camarda

- 241 Pedestrian routes and accessibility to urban services: An urban rhythmic analysis on people's behaviour before and during the Covid-19**  
Cecilia Zecca, Federica Gaglione, Richard Laing, Carmela Gargiulo

## REVIEW NOTES

- 259 After Recovery: towards resilience**  
Carmen Guida

- 265 Strategies and guidelines for urban sustainability: the Covid-19 effects on the mobility system in Italy**  
Federica Gaglione

- 271 Toward greener and pandemic-proof cities: Italian cities policy responses to Covid-19 outbreak**  
Gennaro Angiello

- 281 Entrepreneurship in the city: the digitalization**  
Stefano Franco

## REVIEW NOTES

The quality of the offer that the magazine has set as a priority since its foundation has given increasingly encouraging results, first with the recognition by readers and, subsequently, by the institutional bodies responsible for the quality of research in Italy. The recent inclusion of TeMA in the list of reviews of A class represents a milestone to start from. The Review Pages section, since the first issue of TeMA in 2007, has played a substantial role in the general balance of the review, both as an expression of constant updating and as a permanent observatory on emerging issues relating to the relationships between urban planning, mobility and the environment. Starting from the issue of August 2020, the Review Pages will have the new form of Review Notes. They will become short scientific articles, which, while maintaining the function of a reasoned review, will deepen relevant issues in the context of the scientific debate on the recent challenges of the cities, territories and environment. The Review Notes will contain critical thoughts congruent with the topic of the review. The guidelines for these considerations will be: centrality and interest in the scientific debate; advancements and innovativeness of topics; significant gaps resulting from the analysis of the state of the art; recent evidence stemming from the scientific debate; perspectives and potential developments. The Review Notes will consist of four sections, edited by the following researchers:

- Carmen Guida for the section Urban Planning Literature Review;
- Federica Gaglione for the section Town Planning International Rules and Legislation Overview;
- Gennaro Angiello for the section Projects and Innovative Approach;
- Stefano Franco for the section Economy, Business and Land Use.

Researchers can identify a specific and personal topic to deepen in more than one issue, becoming self-contained scientific articles. Articles are subjected to the usual submission process required by the statement of TeMA journal. The Editorial Staff provides a specific quality control of the articles.

## REVIEW NOTES – Urban planning literature review

### After recovery: towards resilience

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#### Abstract

Starting from the relationship between urban planning and mobility management, TeMA has gradually expanded the view of the covered topics, always remaining in the groove of rigorous scientific in-depth analysis. This section of the Journal, Review Notes, is the expression of a continuous updating of emerging topics concerning relationships between urban planning, mobility and environment, through a collection of short scientific papers written by young researchers. The Review Notes are made of four parts. Each sections examines a specific aspect of the broader information storage within the main interests of TeMA Journal. In particular, the Urban planning literature review section aims at presenting recent books and journals, within global scientific panorama, on selected topics and issues.

This contribution aims at discussing the main impacts and consequences of the Covid-19 pandemic on our lives and urban systems. While for the last issue of TeMA, this section of the journal was dedicated to the emergency phase, according to the new policy and strategic actions aimed at improving the coexistence of the new coronavirus within urban environments, this contribution is focused on how policy makers can enhance urban resilience, in sight of potential new health crisis.

#### Keywords

Resilience; Emergency; Covid-19.

#### How to cite item in APA format

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## 1. Introduction

The 1(2020) TeMA Issue was published during the lockdown, while policy makers at every level were working on limiting people's movements and activities, in order to avoid an irreversible collapse of healthcare provision system. The global lockdown imposed by the health emergency has highlighted the extreme fragility of contemporary social and economic systems. The crisis we are experiencing demonstrates the unequivocal interrelation between human health and the ecosystem conditions of the planet. The global scale and the rapid spread of the epidemic have shown this reality in all its drama, but also its potential. Nowadays, we are living a second phase, even more challenging than the first one, since local and regional authorities are working on new practices in order to limit socio-economic consequences, guarantying a certain level of service for almost every activity and service. Since TeMA 1(2020), a Special Issue titled Covid-19 vs City-20 was published. It collects twenty-seven contributes of international researchers and technicians, in form of scenarios, insights, reasoning and research on the relations between the City and the impacts of Covid-19 pandemic, questioning about the development of a new vision and a general rethinking of the structure and urban organization. It is the proof of a wider interest from academia, as well as from technicians and policy makers, in finding new and innovative solutions to improve urban resilience towards the spread of new infections and diseases. Although researchers and scientists are still questioning about the main relationships between territorial and urban issues and the dynamics of Sars-Cov-2 virus it is clear how it impacts of people's behaviors, changing ordinary daily lives and attitudes, especially in urban areas. In fact, the spread of the new coronavirus and the consequent Covid-19 disease showed significant vulnerabilities for cities all over the worlds due to high density of people and activities, which may not guarantee appropriate social distances. Furthermore, according to scientists, this pandemic is unlikely to be the last. As the World Bank and the Intergovernmental Panel on Climate Change (IPCC, 2019) have been saying for years, global warming could lead to the multiplication of tropical pandemics in the future. This could make public health interventions more problematic and, therefore, our ability to control the spread of epidemics less effective. The extraordinary scale of the Covid-19 crisis is evident in the growing deaths and economic losses the pandemic has wrought in every country of the world. Bearing that in mind, the concept of urban resilience will have new rise, taking into account new and complex challenges. This contribution is divided in two parts: the first one aims at summarizing the notion of resilience and its application to urban planning policies and practices; the second part presents some interesting scientific products, two books and a journal's special issue, concerning urban resilience in emergency outbreak. The first book, "The City in Need. Urban Resilience and City Management in Disruptive Disease Outbreak Events" from Cheshmehzangi (2020), fills a literature gap, through the overarching concept of 'resilience thinking', addressing critical issues of preparedness, responsiveness and reflectiveness during emergencies, focusing on cities and how they should prepare to avoid a variety of adversities and uncertainties caused by their outbreaks. The second book, "The Routledge Handbook of Urban Resilience", by Burayidi et al. (2020), provides a comprehensive discussion and overview of urban resilience, including socio-ecological and economic hazard and disaster resilience, and important direction to practitioners and civic leaders who are engaged in supporting cities and regions to position themselves for resilience in the face of climate change, unpredictable socio-environmental shocks and incremental risk accumulation. The third scientific product is a special issue from the Journal Sustainability, "Resilience Engineering for Sustainability: Methodological Approaches and Practical Experience". The aim of this collection of papers is to gather state-of-the-art knowledge on resilience and sustainability, and to discuss innovative and long-term research paths.

## 2. Urban Resilience in Planning practices

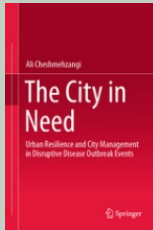
Resilience and resilience thinking have become important concepts in both scientific research and in policy discourse (Gargiulo & Lombardi, 2016); they represent advanced concepts, in a wider scientific and technical



frame related to sustainability (Mazzeo, 2017). Resilience is interpreted as an approach, or family of approaches, that can cope with the high levels of uncertainty present in complex urban challenges (Errigo, 2018; Zucaro & Morosini, 2018). Resilience gained interest particularly in urban studies mostly due to its potential applicability to a wide range of urban risks and problems (O'Hare & White, 2013; Stumpp, 2013; Meerow et al., 2016). Its positive connotations may also have contributed: 'strengthening resilience' provides a distinctly more positive policy framing than 'reducing vulnerability' (McEvoy, et al., 2013). In practice, the concept has been taken up by cities and network organizations of cities worldwide. For example, the ICLEI - Local Governments for Sustainability network, a global network of more than 1,750 local and regional governments committed to sustainable urban development, active in 100+ countries, has been promoting resilience and organizing 'Resilient Cities' congresses since 2010 (Otto-Zimmermann, 2011). Furthermore, '100 Resilient Cities' project has been "helping cities around the world become more resilient to the physical, social, and economic challenges that are a growing part of the 21st century" (Rockefeller Foundation, 2019), for instance by stimulating the appointment of Chief Resilience Officers in cities and by providing tools and support. Similarly, resilience gained traction in recent intergovernmental frameworks, including the EU's Urban Agenda, and the UN's UNFCCC COP21 Paris Agreement, the Sendai Framework for Disaster Risk Reduction, the Sustainable Development Goals, and the Habitat III New Urban Agenda. The resilience concept has much of its origins in ecology and complex adaptive systems research (Folke, 2006; Holling, 1973), where it is used in relation to the stability of ecosystems and the capacity of a system to recover following some shock or disturbance. It has since been applied in a wide range of scientific fields (Brand & Jax, 2007; Matyas & Pelling, 2015). From the socio-ecological perspective, the urban resilience concept has been defined as the capacity of a system to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, identity, and feedbacks (Walker et al., 2004). Since it was introduced in scientific literature, definitions have varied from generic to specific and even more elaborate: "the ability of a city or urban system to withstand a wide array of shocks and stresses", "the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience" (Rockefeller Foundation, 2019), or "the ability of an urban system - and all its constituent socio-ecological and socio-technical networks across temporal and spatial scales - to maintain or rapidly return to desired functions in the face of a disturbance, to adapt to change, and to quickly transform systems that limit current or future adaptive capacity" (Meerow et al., 2016). Turning resilience from a scientific concept into practical urban interventions is challenging, as resilience is a fairly intangible and malleable concept, leaving much room for interpretation. For practitioners, the flexibility of the resilience concept may help its function as a 'boundary object', connecting the many fields, sectors and stakeholders involved in the urban system (Brand & Jax, 2007). However, it can also hinder practice, through lack of clarity and footholds to make resilience manageable and implement it in local plans. Indeed, critical literature argues that, in practice, resilience is often used as catchall term for futureproofing, without clear-cut interpretation of what it means or how specific interventions or system characteristics might improve it. This can lead to ad-hoc policymaking, where choices taken in translating resilience to the local context remain non-deliberate, implicit, and possibly unfitting to local goals and needs. Within the scientific panorama of urban resilience definitions, it is worth noting that, considering the Covid-19 pandemic emergency, the relationship between urban resilience and anthropic risk, especially health risk, has inevitably distorted the "normality" to which we were used to (Pirlone & Spadaro, 2020). In fact, the Covid-19 emergency has had and still will have significant long-term effects on the times, uses and organization of cities, and their adaptability to this novel challenge requires the synergic work of all actors who live or work in a city. From healthcare to high street retail, transport to food and medical supply chains, the coronavirus outbreak, has exposed the limited resilience of our cities to a terrifying tragedy that was not and is not inevitable (Rockefeller Foundation, 2020). The immediate priority of those who govern the territory was obviously aimed at health and solving the critical

issues connected to the pandemic, but now many other challenges must be considered in urban and territorial planning, concerning mobility and public transport facilities, public spaces and offices, essential activities (schools, hospitals, healthcare centers, etc.) and their resources. The following books aims at explaining and applying the concept of urban resilience to planning practices, in order to prepare cities and urban environments to external and impactful agents and to rapidly adapt, limiting irreversible and dangerous consequences.

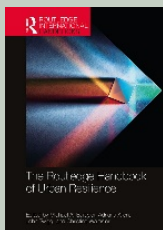
### **The City in Need. Urban Resilience and City Management in Disruptive Disease Outbreak Events**



Author/Editor: Ali Cheshmehzangi  
Publisher: Springer  
Publication year: 2020  
ISBN code: 978-981-15-5487-2

This book fills a major gap in academic research, by exploring 'urban resilience measures' and 'city management issues' during disruptive disease outbreak events. Based on the overarching concept of 'resilience thinking', it addresses critical issues of preparedness, responsiveness and reflectiveness in the event of outbreak, focusing on cities and how they should prepare to combat a variety of adversities and uncertainties caused by outbreaks. This comprehensive book is an essential guide for decision-makers, city authorities, planners, healthcare and public health authorities, and those communities and businesses that face disease outbreak events. It also offers a set of practical measures to support the development of tailor-made strategies in the form of an action plan. These strategies should address outbreak control and containment measures, institutional rearrangements, management of urban systems, and healthiness of the society. Divided into six chapters, this book explores important topics of 'urban resilience' and 'city management' for preparedness action plans and responsiveness planning. Further, it presents a comprehensive urban resilience approach used to support city management in the recent outbreaks in Chinese cities, which can be applied in cities around the globe to strengthen their resilience and maximize the practicality of urban resilience and minimise urban vulnerabilities during disease outbreaks. Highlighting topics such as maintaining societal well-being, community engagement, and multi-sectoral city management enhancement, this book offers a unique combination of research, practices and lessons learned to aid cities in need. It is made of six chapters which cover the topic of urban resilience in outbreak events for the first time, helping readers gain a holistic understanding of urban resilience and city management measures in disease outbreak events. Furthermore, each chapter addresses key outbreak issues from city preparedness, city responsiveness and city management perspectives.

### **The Routledge Handbook of Urban Resilience**



Authors/Editors: Michael A. Burayidi, Adriana Allen, John Twigg, Christine Wamsler  
Publisher: Routledge  
Publication year: 2019  
ISBN code: 978-113-858-359-7

This volume provides a comprehensive discussion and overview of urban resilience, including socio-ecological and economic hazard and disaster resilience. It provides a summary of state-of-the-art thinking on resilience, the different approaches, tools and methodologies for understanding the subject in urban contexts and brings together related reflections and initiatives. Throughout the different chapters, the handbook critically examines and reviews the resilience concept from various disciplinary and professional perspectives. It also discusses major urban crises, past and recent, and the generic lessons they provide for resilience. In this context, the authors provide case studies from different places and times, including historical material and contemporary examples, and studies that offer concrete guidance on how to approach urban resilience. Other chapters focus on how current understanding of urban systems – such as shrinking cities, green infrastructure, disaster volunteerism, and urban energy systems – are affecting the capacity of urban citizens, settlements and nation-states to respond to different forms and levels of stressors and shocks. The handbook concludes with a synthesis of the state-of-the-art knowledge on resilience and points the way forward in refining the

conceptualization and application of urban resilience. The book is intended for scholars and graduate students in urban studies, environmental and sustainability studies, geography, planning, architecture, urban design, political science and sociology, for whom it will provide an invaluable and up-to-date guide to current approaches across these disciplines that converge in the study of urban resilience. The book also provides important direction to practitioners and civic leaders who are engaged in supporting cities and regions to position themselves for resilience in the face of climate change, unpredictable socioenvironmental shocks and incremental risk accumulation.

### Special Issue "Resilience Engineering for Sustainability: Methodological Approaches and Practical Experience"



Authors/Editors: Giulio Di Gravio, Riccardo Patriarca, Francesco Costantino  
Publisher: MDPI  
Publication year: 2020  
ISSN code: 2071-1050

This is a Special Issue of Sustainability, an international, cross-disciplinary, scholarly, peer-reviewed and open access journal of environmental, cultural, economic, and social sustainability of human beings. It provides an advanced forum for studies related to sustainability and sustainable development. The purpose of this Special Issue is to gather state-of-the-art knowledge on resilience and sustainability, and to discuss innovative and long-term research paths. Such perspectives are expected to be of interest for both researchers and practitioners, in order to delve into the complexity of current and future socio-technical environments. The Special Issue contains interesting contributions which refer to conceptual and theoretical discourses, exploring the concepts of resilience and sustainability for the analysis of socio-technical systems. Furthermore, relevant contributions may explore the usage of systemic methods and models typical of resilience engineering (e.g., functional resonance analysis method, resilience analysis grid, resilience early warning indicators) in socio-technical work environments, and in urban management, disaster response, and crisis management. The Special Issue was published in March 2020 and contains seven papers from researchers and scientists from the whole world. The key words of the contributions are: resilience management, resilience engineering, safety management, sustainability, environmental governance, management of ecological systems, complexity management, socio-technical systems, adaptive capacities, crisis management, transportation, industrial plants, urban resilience, ecological resilience, multi-disciplinary resilience, quantitative and qualitative methods.

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