

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

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The cover image is a photo of a street in the city of Naples during the COVID-19 pandemic quarantine (April 2020)

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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The web report offers the readers web pages which are directly connected with the issue theme.

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02_Books and Journals

The books review suggests brand new publications related with the theme of the journal number.

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03_Laws

The law section proposes a critical synthesis of the normative aspect of the issue theme.

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04_Urban practices

Urban practices describes the most innovative application in practice of the journal theme.

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05_News and events

News and events section keeps the readers up-to-date on congresses, events and exhibition related to the journal theme.

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Review pages: Web Resources

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In this number

Urban sprawl and land use

The issue of land use has been debated in different fields of studies and it is also strongly linked to the concept of soil consumption. Actually, this issue can turn in an effective soil depletion whose consequences affect environmental and economic aspects, as well as urban and social components. One of these consequences is mainly due to the phenomenon of urban sprawl, that is, the rapid spread of settlements (Bencardino, 2015). Urban sprawl is a phenomenon that measures the rapid growth of urban settlements with consequent impacts on the environment, above all in terms of land use. The phenomenon of urban sprawl occurs, with different characteristics, all over the world and if, on the one hand, it is due to the rapid growth of urbanized areas resulting in the incorporation of existing suburban nuclei, on the other hand, it is caused by the growth of small agglomerations around the metropolitan areas that contributed to expand the urbanized area. In most cases, an urban sprawl represents the main cause of land use. The change is mostly evident in the territories where agricultural spaces overlap with industrial settlements, commercial areas, new residential neighborhoods and residual areas that do not respond to any urban design but to the logic of settlement arrangements, which does not recognize nor identify the social, economic and urban problems arising from such a change (Zucaro & Morosini, 2018; Dieleman & Wegener, 2004). However, urban sprawl involves a significant amount of soil loss, especially in agriculture, and of natural resources, causing severe ecological impacts. In the scientific framework of reference, much research aims to highlight the impacts of urban sprawl on: environmental and ecological issues, related to land use and to the fragmentation of environmental networks; economic issues, conditioned, for example, by the lack of adequate public transport networks which makes people use private road transport modes (with the economic consequences thereof); socio-cultural issues, due to the separation of functions (Bianconi et al., 2018).

The study of the phenomena of urban sprawl and land use is therefore indispensable to develop strategies in the governance of sustainable urban and territorial transformations. In addition, there is a need for coordinated and cohesive actions at international, national, regional and local level.

In this perspective, in some EU countries, such as Austria, Belgium (Flanders), Germany and Luxembourg, both national and regional rules have established a quantitative limit for land take. The values, however, are indicative and used more as a tool for monitoring the phenomenon than as a restrictive measure. In Germany, for example, the results obtained show that without specific binding measures and programs, these indicative limits are not sufficient. Unlike the aforementioned EU countries, Andalusia (southern Spain) has introduced a quantitative limit of 40% of the urbanized surface, to which the regulatory plans of small and medium-sized municipalities must refer. The Danish Law on the governance of territorial transformations has limited the

construction of large shops and shopping centers on undeveloped land outside large urban areas, encouraging the functional mix in small and medium-sized urban centers and rejecting the construction of structures located in rural regions characterized by a demographic decline. These measures were promoted mainly to avoid the phenomenon of urban sprawl and the development of suburban nuclei characterized by a low population density.

The following section illustrates three websites dealing with urban policies and strategies for a sustainable development aimed at reducing land use and urban sprawl phenomena.



Urban@it Centro nazionale di studi per le politiche urbane
www.urbanit.it

“Urban@it - National Centre for Urban Policies Studies” is an association to which many Italian universities (Alma Mater Studiorum University of Bologna, Polytechnic University of Milan, University IUAV of Venice, University of Florence, Roma Tre University, University of Naples Federico II, Polytechnic University of Bari, University of Milano-Bicocca, La Sapienza University in Rome, Polytechnic University of Turin, University of Basilicata, Bocconi University of Milan, Aldo Moro University of Bari, Gran Sasso Science Institute, University of Genoa, University of Turin) and another organization (Italian Society of Urbanists - SIU) adhere. It was established on December 15, 2014. The Centre aims to build and consolidate a strong and mutual relationship among research, institutions, production sector and active citizenship around the theme of urban policies. It aspires to qualify as a think tank at the service of cities and primarily of the Public Administration, proposing to channel academic and non-academic research, in order to fuel innovation in public policies.

The website is organized into nine sections: Home page, About (Who’s who), Working Groups, News and Events, Blog, Newsletters, Annual Reports (Papers), Online Magazine, Contacts.

The “Working Groups” section is very interesting and structured in 14 subsections:

- Urban Regeneration;
- Culture;
- Cities and Universities for Sustainable Development;
- Universities and Cities: a Permanent Laboratory of Policy Transfer;
- Economic Crisis in Southern Cities;
- A Comparison of National and European Urban Agendas;
- Policies and Projects for Resilience and Climate Change;
- Social and Spatial Inequalities, Migrants and Citizenship, the Housing Issue;
- Urban Security;
- Institutional Reorganization and City Governance;
- Urban Mobility and Accessibility Policies;
- City Finance;
- Observatory on Metropolitan Cities;
- Territories of Industrial Production and the Perspectives of the New Manufacture.

By clicking on one of the subsections, users will quickly access the various Research Groups involved in specific issues. A very useful section is the one dedicated to the news and events, where users can find and read more about past and future initiatives.

The most interesting section is “Annual Reports”, in which cities annual reports and a series of papers connected to them can be downloaded in pdf format.



CNU Congress for the New Urbanism
www.cnu.org

The Congress for the New Urbanism (CNU) is an organization promoting the concepts of sustainable growth, pedestrian mobility, communities and healthier living conditions, which can be pursued through the development of pedestrian districts that welcome an adequate functional mix.

New Urbanism is a planning and development approach based on the principles of how cities had been built in recent centuries: pedestrian blocks and streets, houses and shops in close proximity and accessible public spaces. In other words: New Urbanism focuses on human-scaled urban design. The New Urbanism model contrasts with the conventional one based mainly on the use of the car and associated with the image of the urban sprawl whose typical features, especially in the United States, are the presence of skyscrapers in the cities, highways, single-family homes in the suburbs and malls usually located in between.

The model put forward by the New Urbanism movement is based instead on the belief that the traditional city, with its functional mix, higher densities and integration of different transport systems, is a much more efficient way of developing settlements characterized by a greater quality of life and sustainable growth.

The website deals with the main issues related to New Urbanism in a very clear and well-organized way.

The contents of the website are organized into 5 sections: Who we are; What we do; Resources; Get involved; Public square. Among them, the "Resources" section is particularly interesting because it collects a large number of best practices, research, publications and reports. The contents of this section are organized into 8 subsections:

- What is New Urbanism?;
- Making the Case;
- Project Database;
- Tools;
- Jobs & RFPs;
- Build a Better Burb;
- New Urbanist Books;
- Press Room.

The "Project Database" subsection represents the range and diversity of work in the New Urbanism. By accessing this subsection, users can consult the contents in preview by clicking on the related links or search for detailed information about the projects from the categories State, Year and Characteristics on the right side of the page. In fact, for each case or project, in addition to the location, there is an in-depth description of the intervention, the objectives pursued, its compliance with the principles of New Urbanism and the plans of intervention. By scrolling the page down, always on the right side, there are links to the CNU twitter page. More interesting reference material can be downloaded from the "New Urbanist Books" subsection, where users can find a review of the central, foundational texts of the New Urbanist movement.

On the same page, by clicking on a link, users can access the subsection "Charter Awards" (which is part of the section "What we do") of the New Urbanist projects rewarded by the Congress since 2001 as exemplary works.

From the "What we do" drop-down menu users can select the subsection "Annual Congress" to learn more about the 2020 Congress for the New Urbanism (CNU 28. Twin Cities), to check the latest news, register as attendees and download the Program Books of past Congresses in pdf format.

In the "Public Square" section, users can also find and download many articles concerning the different principles that inspired the New Urbanism theory.

In each section, at the bottom of the pages, there are links to social networks like Facebook, LinkedIn, Twitter and YouTube.



INU Istituto Nazionale di Urbanistica
www.inu.it

The Italian National Urban Planning Institute (INU) was founded in 1930 to promote Building and Urban Planning Studies. The INU is organized as a nonprofit association carrying out research in the various fields of urban planning, dedicated to the constant updating and renewal of urban planning techniques, the spread of social and cultural values related to the city, the territory, the environment and cultural heritage.

INU is engaged in promoting the development of studies and research by sharing them through the magazines "Urbanistica", the historical journal of the Institute, and "Urbanistica Informazioni", which is also available online since 2011. There are also more targeted and specialized publications, such as the monographs "Urbanistica Dossier" and "Urbanistica Quaderni". In 2001 it launched the magazine "Planum" online, the first European online magazine addressed to the scientific, academic and technical community (not only European) interested to the issues of urban development and environmental protection. "Urbanistica" magazine was included by the Italian National Agency for the Evaluation of Universities and Research Institutes (ANVUR) in Class A. The website is full of information organized into 9 sections: Home; Who we are; Articles; Regulation; Regional Sections; Institutional Offices; Contacts; Events; Newsletter. From the home page, users can have access to a rich network of information, divided into information and reports. At the bottom left of the home page, they can search by categories and in the archive through a drop-down menu, or consult articles by clicking on the proposed keywords. In the left column of the home page, users can also find all projects, events, initiatives and activities, as well as the links to follow INU on the major social networks like Facebook, Twitter and Instagram. The "Events" section reports all scheduled events in a calendar. Moreover, the banner placed on top of each section allows for easy consultation of the latest news, which are shown in a sliding way. In addition to the information on the site itself, all news are connected by links to external web pages where users can deepen the topic of interest.

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Review pages: Books and Journals

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In this number

Emergency in City. How to make complex systems ready?

The beginning of 2020 recorded for the entire world the spread of a Coronavirus disease (COVID-19), a new strain that was discovered in 2019 and has not been previously identified in humans. It was first detected in China and has now been detected in more than 100 locations internationally, so that on 11th March the COVID-19 disease has been defined as a global pandemic by the World Health Organization (WHO). Europe was not spared by this emergency; indeed, it is now the new epicenter of the contagion.

Italy has been the first European country to experience this phenomenon, followed by Germany, France, Spain and others. Local authorities, at every level, had to promptly react in order to limit the spread of the disease and avoid the collapse of healthcare supply systems. European countries and the whole world are experiencing a real emergency which is playing an undisputable role in our cities. Urban environments, as stated by WHO in several reports, represent fertile ground to easily transform the epidemic in a pandemic, for the presence of good road, railway, air and maritime networks. Thus, they are the most vulnerable places for health emergencies, due to the high density of people and activities (De Falco, 2018).

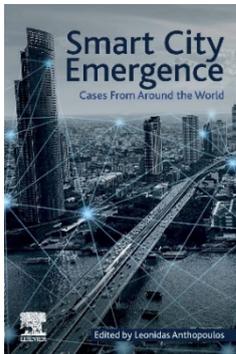
In fact, local authorities are working on strengthen the healthcare provision, which is the most urgent need in short-time period, but they are also working on improving the resilience of urban areas, in order to limit economic and social issues, in the medium- and long-term period. In managing any public health crisis, a city will have two overall tasks – dealing with the sudden large number of sick people and keeping city life as normal as possible for everyone else (WHO, 2008).

Due to the experience of COVID-19 pandemic, policy makers are now facing a further and urgent challenge, which has never been experienced in recent human history, for its rapid and dangerous extension. This one is added to other urban concerns This adds to the other current challenges that cities are facing, such as climate change, sustainability development environmental and energy crises, demographic change, etc. and in this context policymakers need to prepare readily to deal with unexpected emergencies and limit their damage on complex systems such as cities.

In fact, an emergency like the present one, producing significant impacts on most urban activities, affects all the components of the urban system (economic-productive, socio-cultural, communication up to changing personal relationships) including the social subsystem (Allam & Jones, 2020; McKibbin and Fernando, 2020). This section is focused on how scientific literature has worked on this issue during last years. The books and the journal selected have in common some features when dealing with crisis of different nature, in urban environments: the involvement of stakeholders and a good coordination with policy makers as indispensable tools, as well as clear and prompt communications to citizens (Norton, Atun, & Dandoulaki, 2015) also through

emergency mapping tool. Moreover, the first book focuses on the implementation of the Smart City paradigm, presenting different cases from each continent, both from developed and developing countries. The book shows how tools and methods from real-world practice, supplied by the smart use of technologies, are useful to design better strategies to strengthen the resilience of complex systems and consequently improve the response of cities to crisis of different nature. The second book was chosen for this section because it is a useful guide to integrate emergency management practices and disaster behavioral health, which is essential when dealing with the improvement of urban resilience in case of crisis.

Finally, the journal *Cities* was selected because it collects researches from the worldwide scientific panorama and one of its main topics is the study of urban planning practices in case of emergencies. They are a solid ground for the implementation in real world practices. In conclusion, with half the world's population living in them, cities are one of the most important features of our planet. All cities are different, of course, but they share the common feature of concentrating large numbers of human beings in one place. That common feature makes cities particularly vulnerable to natural or anthropic risks, such as the outbreak of COVID-19 infectious disease. Although much city may be different, the reviewed documents present interesting scientific insights which are valid referments to face emergencies of different nature, both in the short- and in the long-term period.



Title: **Smart City Emergence. Cases from Around the World.**

Author/Editor: Leonidas Anthopoulos

Publisher: Elsevier

Publication year: 2019

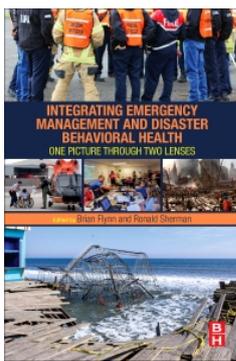
ISBN code: 9780128161692 (hbk), 9780128165843 (ebk)

Smart City Emergence: Cases from around the World analyzes how smart cities are currently being conceptualized and implemented, examining the theoretical underpinnings and technologies that connect theory with tangible practice achievements. The Editor of the book, Leonidas Anthopoulos, is Professor of e-Business and Strategy at the University of Thessaly, Greece, and he has been working in the smart city domain since the early 2000's. The book compares how smart cities of different sizes are evolving in different countries and continents, using numerous cities from different regions around the globe. Furthermore, it examines the challenges that cities are facing as they adopt the smart city concept, separating fact from fiction, with insights from scholars, government officials and vendors currently involved in smart city implementation.

The book has interesting features: it utilizes a sound and systematic research methodology, to highlight the scopes, the costs, the risks and the scheduling of implementation strategies, for each case study; moreover, it includes a review of the latest research developments; chapter contains a brief summary of the case, an illustration of the theoretical context that lies behind the case, the case study itself, and conclusions showing learned outcomes. The book examines smart cities in relation to climate change, sustainability, natural disasters and community resiliency. The presented cases come from all over the World and from each continent: Évora (Portugal), Turin (Italy), Leuven (Belgium), Wien (Austria), Amsterdam (Netherlands) and its Energy Atlas Project, Trikala (Greece), the smart policy ok Korea, the smart city of Hangzhou (China), defined as the Internet village, Changsha (China), Dehradun, Nagpur, Allahabad and Pune (India), Nara (Japan), the vision of smart city in Singapore, Newark (New Jersey, US), Quayside (Toronto, Canada), examples of smart city implementation from Brazil, as Porto Alegre and the smart health of Gerint, and then, Algeris (Algeria), Johannesburg (South Africa) and Tunisia.

Smart City clearly plays a significant role for governments, due to their economic and environmental impact, and modern strategies utilize its potential for dealing with critical issues, such as growth, poverty, social coherence, climate change and resilience to crisis, even pandemic. The collected material is impressive, since it highlights how different cities approach to implement the Smart City paradigm. Similarities and variances deal not mainly with the geography or the community but particularly with the Smart City vision and the city mission that affected its definition.

For instance, several cities prioritized energy efficiency, and corresponding interventions appear in the Smart City scope; others focused on local growth or social cohesion, and the Smart City was employed to bring new ideas, investments, or to soften the community's divergencies; finally, others view a leading role in the Smart City arena and combine smart solutions with the local strengths and the international role that a city play. Moreover, this book contains well-known Smart City stories, such as from Turin, Amsterdam, Wien and Singapore, but it also highlights some not that famous cases, both from developed and developing countries.



Title: **Integrating Emergency Management and Disaster Behavioral Health. One picture through two lenses.**

Author/Editor: Brian Flynn Ronald Sherman

Publisher: Elsevier

Publication year: 2017

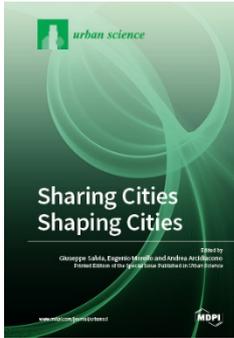
ISBN code: 9780128036389 (hbk), 9780128036396 (ebk)

Integrating Emergency Management and Disaster Behavioural Health identifies the most critical areas of integration between the profession of emergency management and the specialty of disaster behavioural health, providing perspectives from both critical areas, and also including very practical advice and examples on how to address key topics. Behavioural health must be recognized as an essential component of emergency response. Everyone touched by disaster, whether as a survivor or rescuer, is affected mentally and emotionally by the experience, and the psychological effects can linger.

Integrating Emergency Management and Disaster Behavioural Health is the guide both emergency management and behavioural health professionals need as a foundation for any sound disaster preparedness, response, and recovery strategy. Each chapter features primary text written by a subject matter expert from a related field that is accompanied by a comment by another profession that is then illustrated with a case study of, or a suggested method for, collaboration.

The book is very interesting because it addresses the current state of the collaboration between the emergency management and disaster behavioural health communities as presented from pioneers in their respective field. It also focuses on practical examples of what works and what doesn't, and it stresses both legal and ethical considerations and the public-private partnerships that are important for leadership in disaster situations. If integration of emergency management (EM) and behavioural health in disasters is to occur, it must rise on a foundation of mutual understanding and respect.

In practice, many in each profession often have little understanding or awareness of the other. In preparation for each profession, there is little exposure to the other field. When behavioural health experts find themselves participating in disaster preparedness and response, they seldom, at least initially, know much about the field of EM. Likewise, when emergency managers first encounter behavioural health experts while preparing for and responding to disasters, they seldom have a comprehensive understanding of roles behavioural health professionals can play.



Title: **Urban Disaster and Recovery**

Journal: Urban Science

Editor-in-Chief: Michael Peter Smith, Research Professor of Community Studies,
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ISSN: ISSN 2413-8851

Urban Disaster and Recovery is a Special Issue edited by the MDPI Journal *Urban Science*, including scientific papers concerning practices and methods to enhance urban resilience. *Urban Science* is a scholarly international journal which provides a platform for the exchange of ideas, methods and information on urban and regional studies. It is a peer-reviewed, open access journal that publishes high quality original articles, critical reviews, research notes, and short communications. The main subject areas are urban and regional economic and political development, resource controversies, urban policy and governance, urban sprawl and redevelopment, land use, and transport, infrastructure, the built environment, rural development, etc. The Special Issue selected for these Review Pages, concerns how urban environments are dealing with reducing the impacts of disasters and improving the processes for recovery and reconstruction according to a resilient approach, enhancing a planning and policy perspective. Both theoretical and case studies are presented, whose focus mainly concerns the following topics: how to reduce impacts and threats; how to adapt and mitigate future shocks to the urban system; social dimensions and issues of equity in recovery; cascading effects of disasters; how to improve response, recovery, and reconstruction; resilient urban systems and reducing vulnerability; case studies that show not only success but failures and the role of institutional capacity.

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Review pages: Laws

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In this number

City, energy and climate change: European and National strategies 2030

Climate change and policies for adapting cities to the manifestation of phenomena (heat waves, heavy rainfall, drought, and storm surges) have long received particular attention within the EU institutions. Climate change currently appears to be the main threat as it poses complex challenges for Europe and the whole world (Errigo 2018). Cities are the main contributors to energy and greenhouse gas consumption, which is the main cause of climate-related risks that threaten populations. CO₂ emissions mainly due to urban activities represent around 80% of global greenhouse gas emissions (Gargiulo, & Russo 2017).

The October 2018 report of the Intergovernmental Panel on Climate Change (IPCC) highlighted the 1.5° C increase in the planet's temperature with a consequent sea level rise. There is urgency for the definition of policies and strategies aimed at endorsing cities' ability to face climate impacts. The challenge of the next future consists in supporting the transitions from the present model towards a low carbon and more sustainable model of development, in order to reduce urban vulnerability to climate-related risks and CO₂ emissions, thus supporting the transition of cities towards a low carbon development model.

As an example of this target, the Climate Conference held in Paris in 2015 for the first time gained an important goal: a new global agreement on climate change covering the period from 2020 onward was signed according to which all countries committed themselves to reduce their greenhouse gas emissions. On this occasion, the distinction between industrialized and developing countries was effectively abolished. The Paris Agreement constitutes a legally binding instrument in the United Nations Framework Convention on Climate Change (UNFCCC). One of its priority objectives was the progressive reduction of global greenhouse gas emissions based on valid common principles for all countries.

In more detail, in Art.2 the document sets the objective of limiting the average global warming well below 2°C compared to the pre-industrial levels, thus limiting the temperature increase to 1.5° C. It also aims to direct private and state financial flows towards low greenhouse gas emissions development in order to improve adaptability to climate change.

Art. 4 and 5, in a legally binding form, underline that all countries must report and comment every 5 years on a national emission reduction target (Nationally Determined Contributions, NDC) and inform parties. These objectives must be clear and quantifiable, related to each other and as ambitious as possible.

In this direction, Art. 6 regulates that, in order to achieve the purposes set out in the Agreement, all countries are encouraged to cooperate voluntarily for the implementation of their contributions determined at national level to increase their mitigation ambitions and adaptation to climate change and at the same time to promote sustainable development and environmental integrity.

Art. 7 invites all countries to draw up, present and update plans and measures on a regular basis to encourage adaptation to climate change. Each country can independently define the time and extent necessary for presenting the plans at Union level. Countries must also prepare a periodic report on adaptation measures. The Paris Agreement does not establish new obligations regarding climate finance in Art. 9. Industrialized countries are, as yet, legally required to support developing countries in adopting their measures to adapt and reduce emissions. Even though scholars and environment specialists are skeptical about, the Agreement can be considered as a starting point for the definition of the role of cities, regions and local authorities in tackling climate change. In these regards in fact, it directs cities to: (i) intensify their efforts and support initiatives aimed at reducing greenhouse gas emissions; (ii) reduce vulnerability to the negative effects of climate change by aiming for a resilient urban model; (iii) maintain and promote regional and international cooperation.



European strategy: The Integrated National Energy and Climate Plan

In accordance with the objectives set out in the Paris Agreement, the European Union presented the document "A clean planet for all. Long-term European strategic vision for a prosperous, modern, competitive and climatically neutral economy" (in support of the commission communication COM (2018) 773). This document sets even more ambitious objectives than those set out in the European strategy for 2030 because it aims to eliminate net greenhouse gas emissions by 2050. The communication also anticipates the provisions of Regulation (EU) no. 2018/1999 of 11 December 2018 on the governance of the Energy Union and climate action. The governance mechanism outlined in EU Regulation no. 2018/1999 is based on the long-term strategies for the reduction of greenhouse gases in accordance with the Paris Agreement, defined in Articles 15 and 16 of the Regulation, and, in particular, on the drafting of the integrated National Energy and Climate Plan (NECP) covering a ten-year period starting from the decade 2021-2030.

Article 3 of the Regulation outlines the contents that the NECP must have.

- An overview of the procedure performed to define the plan itself regarding public consultation and stakeholder participation with the related results.
- A description of regional cooperation with other Member States in drawing up the plan.
- A description of the objectives and dimensions of the Energy Union particularly referred to five different areas outlined in Art. 4 of the Regulation: (i) energy security; (ii) internal energy market; (iii) energy efficiency; (iv) decarbonization; (v) research innovation and competitiveness.
- The integrated national interim reports on energy and climate transmitted by the Member States and the Commission's integrated monitoring arrangements.
- An indicative trajectory for achieving the objectives for energy efficiency, renewable sources, reduction of greenhouse effect emissions. Each Member State shall describe how to pursue such objectives and what measures to take (see Art. 5, 8 and Annex I of the Regulation).
- A description of the existing regulatory and non-regulatory barriers and obstacles that may hinder the achievement of the objectives. In the NECPs, the Member States can build on existing national strategies or plans, such as, for Italy, the National Energy Strategy - SEN 2017 (recital 25 of the Regulation).

The objectives to be developed in the five areas are linked to the aim pursued by the EU in 2030. In more detail, the importance of focusing on a city model that aims to reduce greenhouse gas emissions is underlined. the new Regulation (EU) 2018/842 (article 4 and annex I) in accordance with the 2016 Paris Agreement sets

the binding levels of emission reductions to 2030 for each Member State. The binding target for the EU as a whole is an internal reduction of at least 40% of emissions compared to 1990 levels, to be achieved by 2030. In addition, Member States expect that the share of energy from renewable sources in gross final energy consumption in 2030 is at least 32%, as explained in Directive (EU) 2018/2001 (Art.3). At the same time, from 1 January 2021, the share of energy from renewable sources in each Member State's gross final energy consumption shall not be lower than the baseline share. Finally, Directive 2018/2002/EU on energy efficiency sets a target for 2030 of at least 32.5% compared to the 2007 scenario (Art.1). Art. 7 of the Directive obliges Member States to achieve their energy saving targets in the end use of energy by 2030.

The procedure to draw up the NECP, pursuant to Article 9 of the Regulation, defines that the plan's validity is of 10 years. Each Member State draws up and transmits the proposal for an integrated National Energy and Climate Plan to the Commission that evaluates the proposals and can make specific recommendations for each Member State within six months before the deadline for submitting these plans expires. If the Member State decides to deviate from a recommendation or a substantial part of it, it must state the reasons for its decision. A public consultation is foreseen, with which the Member States make their proposed plan available.

Interim reports on the implementation of the national plans, functional to the presentation of updates to the plans themselves, are foreseen too. The first biennial interim report is scheduled for 15th March 2023 and every two years thereafter (Art.17). By 30th June 2023 and therefore by 1st January 2033 and every 10 years thereafter, each Member State shall submit to the Commission a proposal to update the latest notified national plan or provide the Commission with the justification and reasons for not updating the plan. By 30th June 2024 and therefore by 1st January 2034 and every 10 years thereafter, each Member State shall submit to the Commission the update of the last notified plan, unless it has motivated that the plan does not require updating (Art.14).



The Italian Integrated National Plan for Energy and Climate 2030

Italy published in January 2020 the Integrated National Plan for Energy and Climate (PNIEC), prepared with the Ministry of the Environment and Protection of the Territory and the Sea and the Ministry of Infrastructure and Transport. The new planning tool also incorporates the changes contained in the Decree Law on Climate as well as those on investments for the Green New Deal envisaged in the Budget Law for the year 2020. The Italian PNIEC sets binding targets for 2030 on energy efficiency, renewable sources and reduction of CO₂ emissions. It also establishes the target to be reached in terms of energy security, interconnections, the single energy market and competitiveness, development and sustainable mobility, defining precise measures to guarantee the achievement of the objectives defined by the Paris Agreement and the transition to an economy with zero climate impact by 2050. The government aims at a reduction in emissions of 56% in the large industrial sector and of 35% in the service sector and transport, bringing the share of energy from RES in Gross Final Energy Consumption to 30%.

Italy intends to accelerate the transition from traditional fuels to renewable sources, promoting the gradual abandonment of coal for electricity generation in favor of an electric mix based on a growing share of renewables and, for the remaining part, on gas by 2050. Furthermore, it aims to bring the share of energy from RES in Gross Final Energy Consumption to 30%, to reduce primary energy consumption of 43% (compared to the PRIMES 2007 scenario) and greenhouse gases of 33%. In particular, the expected contribution of renewables for the satisfaction of total gross final consumption by 2030 differs according to

the different sectors: - 55.0% of renewables in the electricity sector; - 33.9% of renewables in the thermal sector; - 22.0% as regards the incorporation of renewables in transport. The measures adopted within the plan are the use of renewable energy sources, such as photovoltaics. The final goal is to increase the photovoltaic capacity to 52 GW by 2030, setting 28.5 GW as the intermediate value to achieve by 2025: it is therefore expected that more than 23 GW of the 30 GW will be installed in the last 5 years, a goal that Italia Solare considers too ambitious. In addition, a scheme concerning tax deductions for energy upgrading and renovation of buildings was defined, for a period of at least 3 years, also through the strengthening of the white certificates. In the heating and cooling sector, the share of renewables will achieve 33.9% of consumption by 2030. Renewables will exceed 15 Mtoe, thanks above all to the increase in renewable energy linked to heat pumps. As for the transport sector, it is expected to exceed 14% to help achieve the 30% target of consumption covered by renewables, up to a renewable share of 22.0% and, therefore, to increase collective mobility (mainly track-based). The plan itself shows that it does not yet fully respond to the climate emergency and to the objectives set out in the Paris Agreement. At the same time, the document presents elements of originality in the implementation of renewable energy interventions. Reading these documents outline the need to face the emergence of the phenomena of climate change with adaptation strategies and measures and at the same time to reduce greenhouse gas emissions through the use of renewable sources with the aim of developing a model urban resilient and sustainable.

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Review pages: Urban practices

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In this number

Planning for an urban aging population: two case studies in the UK

Population aging and urbanization are two converging global trends with significant implications for urban planning and development (Buffel & Philipson, 2012). According to the United Nation World Population Prospects Report, the global population of older people is growing at an unprecedented rate: by 2050, for the first time in human history, there will be more over-65s than children under-15s (UN, 2019). At the same time urbanization will continue to growth, with urban areas absorbing the majority of the expected population growth over the next four decades (UN, 2018). The combined effect of these two converging trends will present huge challenges for the cities of tomorrow that will need to adapt themselves in order to respond to the needs and aspirations of a fast-growing, aging urban population (Plouffe & Kalache, 2010).

An ageing urban population is not inherently a bad thing as it reflects improved health and rising life expectancies. Older people are a resource for their families and communities, and for the wellbeing of the cities where they live. However, in order to tap the potential that older people represent for continued human development, cities and urban area must ensure their inclusion and full access to urban spaces, structures, and services (Bricocoli et al., 2018). They need to become “age-friendly” cities.

An “age-friendly city” is indeed one that promotes active aging and optimizes opportunities for health, participation, and security (WHO, 2017). It is a city that adapts its spaces, structure and services to be accessible to and inclusive for older people with varying needs and capabilities (Buffel & Phillipson, 2012; Gargiulo et al., 2018; Gaglione et al., 2019).

Within this context, developing responsive actions to meet the need of an aging population has become a major objective for cities worldwide. Cities indeed are a locus for bridging across policy sectors to address the concerns of ageing populations in urban settings in an integrated way. To encourage world cities to plan for aging as an integral part of planning their built and social environment, the World Health Organization initiated in 2010 the “Global Network for Age-friendly Cities and Communities”, a collaborative project aimed at fostering the exchange of experience and mutual learning between cities and communities worldwide. The mission of the Network is to stimulate and enable cities and communities around the world to become increasingly “age-friendly”. Today the initiative counts more than 1000 member cities and communities in 41 countries, covering over 240 million people worldwide.

This contribution illustrates two relevant case studies of two UK cities that have joined the WHO network and that have recently developed advanced plans, initiatives and regulations to address their aging population needs: i) Manchester and ii) Bristol.



Manchester

With over 500,000 inhabitants, Manchester is the 2nd most populated urban area in the UK and an important cultural, business, and retail centre. According to the official statistics, the proportion of residents aged 60 and older is 37.7%. By 2028, the number of over 60s is expected to increase by 44%. Manchester is one of the first city to participate in the WHO initiative and its commitment to promote active aging can be rooted in 1993 when the city developed a series of initiatives related to the European Union Year of Older People. This prompted the City Council to create a multi-departmental working group charged with promoting a broader range of opportunities and services for older people. In 2003, the City Council launched the Valuing Older People (VOP) partnership, an initiative designed to develop partnerships with older people and a variety of organizations within the community. Between 2003 and 2010, the VOP program developed a variety of actions on the age friendly theme, including engagement program aimed at involving older residents in the leadership of VOP work, a communication strategy organized around positive images of aging, and the development of initiatives with external partners such as universities and agencies representing the voluntary sector. In 2010, the VOP launched the Manchester Ageing Strategy following extensive consultation with older residents, elected council members, and a panel of nationally recognized experts. The objective of this strategy is to ensure that older citizens are more active and engaged, experience less inequality, receive better-quality care and support, and live in lifetime neighbourhoods with affordable housing options. The strategy has been recently updated (Manchester City Council, 2018) and incorporates a variety of themes including:

- *Housing.* Actions in this domain focus on increasing the supply and choice of homes, increasing the proportion that are accessible to mobility-restricted residents, improving existing homes, and extending support and housing advice services. To meet this goals a number of coordinated actions are envisioned, including: i) a review of the Great Manchester Spatial Framework plan to promote the development of new housing models such as co-housing, city and town-centre living and LGBT-friendly later-life housing; ii) the development of a unified standard for housing renovation that meets the need of the elderly and iii) the promotion of better information scheme such as the Housing Options for Older People scheme;
- *Transport.* Actions in this domain are oriented toward making public transport easier to use, reliable, and more comfortable. This will be achieved by providing better support for people having difficulties getting around and by developing transport hubs and transport information better suited to older people;
- *Environment and safety.* Actions in this domain focus on developing local environmental projects involving older people in order to make public spaces more accessible and safe. Planned actions in this area include: i) the design of pedestrian friendly public spaces; ii) solutions to calm road traffic and iii) the design of street intersections at key locations to improve road safety;
- *Innovation and research.* Actions under this theme are finalized at scaling up local science and research to support businesses designing age-friendly goods and services. To this aim several initiatives have been identified, including: i) supporting opportunities for cross-sectoral cooperation; ii) supporting knowledge transfer from research institutes to local public service leaders and practitioners and iii) host an event for EU innovators in age-friendly practices.



Bristol

With over 465,000 inhabitants, Bristol is the 8th largest urban area in the UK and an important centre for creative media, electronics and aerospace industries, and tourism. According to the official statistics, the proportion of residents aged 60 and older is 17.2%. By 2028, the number of over 65s is expected to increase by 64%. The process of developing Bristol's plan for an Age-friendly City started in 2013 when older people were involved in developing the Bristol Ageing Better partnership. Over 1,200 older people across Bristol contributed their voices around what kinds of projects they would like to see and how they would like organisations and older people to work together. This consultation was a great foundation for the rest of the work and older people continue to be at the heart of the work. In October 2015, the city of Bristol held the first "Age-friendly Conference" within the framework of the WHO network, to bring together individuals to discuss what the issues were in Bristol and how to go forward as a city. A number of public consultation events followed the conference. These consultations were structured based on the WHO Age-friendly City domains with a range of questions asked under each of the domains. Individuals were asked which domain they felt was most relevant to them and the resulting statements were presented for that specific domain. This was used as an indicator of level of importance. Based on these consultation, an initial baseline report was published in 2016 entitled "How Age-friendly is Bristol?" and was compiled by Officers within Bristol City Council. That report started the process of constructing a baseline identifying strengths and areas of improvements, on which the age-friendly work to date has been built. Bristol's Age-friendly Charter was then published in 2016. This set out the 9 visions which further developed the conversation and underpins the first Bristol active aging strategy, published by the City Council in 2018. The strategy incorporates a variety of themes including (Bristol City Council 2018):

- *Community Support & Health Services.* Actions under this theme are finalized at improving access to appropriate health, social care and wellbeing services for older residents. Under these theme, the strategy envisions a reorganization of the services both in terms of location, dimension and operating hours. Beside location and organizational improvements, the strategy put emphasis on the information aspect and in particular on how health and social care agencies across Bristol should jointly develop and implement a single information system for managing core health and social care information;
- *Housing.* This theme concerns with the provision of a balanced supply of accommodations that meets the individual circumstances of older people. Under this theme, for example, the Council will review its social housing policy to better accommodate the growing and diverse demand of social housing for the elderly;
- *Built environment.* Action under this theme are finalized at creating a safer and walkable built environment for the old population. This will include improvements to the street layouts of targeted neighbourhoods as well as site-specific projects that will be implemented to improve access to seating and toilets for older people in Bristol;
- *Civic Participation and Employment.* Actions under this theme are finalized at improving access to jobs and volunteering opportunities for old residents. Incentives will be also provided to employers who carry out programs aimed at better fitting working hours with family or social commitments outside of work.

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Review pages: News and events

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In this number

Climate gentrification: New form of spatial segregation in resilient cities

Especially in more developed countries, cities are increasingly taking green action to improve their resilience to climate change. These plans and interventions mark the emergence of a new type of climate planning: green climate resilience.

Green infrastructure and urban greening projects are often hailed as ways to protect cities from the impacts of climate change. These measures include improved stormwater management and mitigation of hazards such as floods, urban heat island effect and landslides (Finewood et al., 2019). In addition to acting as an adaptation measure, urban greening is described as an economic and social value and an economic and social benefit (Tulisi, 2017; Shigir et al., 2019). For example, new green spaces contribute to increasing the value of property, economic growth and business investment, while providing access to recreational activities, closer social links, strengthening civic networks and social capital and generally improving health.

However, some researchers have highlighted some socio-economic aspects that should be taken into account when designing policies for the environmental regeneration of the city (Kates et al., 2012), such as the so-called green climate gentrification theory, according to which interventions aimed at climate adaptation significantly increase the real estate value of those areas by strongly affecting socially and racially vulnerable groups; in real estate jargon, "adaptations" are also "amenities", and the search for these amenities ends up alienating the disadvantaged social classes.

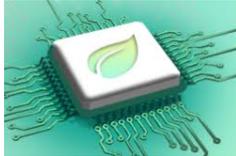
According to a new study by Jesse Keenan, Thomas Hill and Anurag Gumber, all from Harvard University, climate gentrification typically occurs through three main economic dynamics (Keenan et al., 2018).

The first, and the most common, is simply where investors begin to shift capital to elevated properties that are less susceptible to flood damage. The second occurs when climate change increases the cost of living so that only the wealthiest families can afford to stay there because low-income families are forced to relocate because of rising insurance costs, property taxes and repairs caused by damage.

The third pathway is when the environment is reengineered to be more resilient. This is a "resilience investment pathway." The researchers cite the example of Copenhagen: As some of its neighborhoods have been upgraded for resilience, more advantaged households have moved in, and less advantaged, lower-income households have been forced out.

It would be politically negligent not to prepare for the increasing climate risks by investing in green infrastructure in historically abandoned neighborhoods (Molavi, 2018), but it would be necessary to ensure that heterogeneous sections of the population benefit from these measures; the risk would be that climate factors would turn into new elements of spatial segregation of the weaker economic strata in urban areas most exposed to natural hazards.

Covid-19 has caused dozens of trade fairs and conferences to be postponed or cancelled. Some of them are now launching virtual versions. For this reason, we propose a selection of conferences which, although not directly related to the specific theme of this issue, will take place online.



SMARTGREENS 2020

Where: on-line streaming

When: 2-4 May 2020

<http://www.smartgreens.org/>

The purpose of the 9th International Conference on Smart Cities and Green ICT Systems is to bring together researchers, designers, developers and practitioners interested in the advances and applications in the field of Smart Cities, Green Information and Communication Technologies, Sustainability, Energy Aware Systems and Technologies. In particular, the conference proposes the following main thematic areas:

- Smart Cities;
- Smart Infrastructures and Smart Buildings;
- Smart and Digital Services;
- Energy-Aware Systems and Technologies;
- Sustainable Computing and Systems.



BLUE CITIES 2020

Where: on-line streaming

When: 7-8 May, 2020

<http://bluecities.ca/>

Blue Cities conference is a focal point for ongoing conversations between decision makers at all levels of government, the private sector, researchers and knowledge and technology providers. The program focuses on strategically important issues related to municipal water management in Canada. Proper water management is a major challenge for the sustainability and resilience of the cities of the future, and the Canadian Water Network is charting a path through this complex and critical issue. The conference will bring together leading people and ideas so that Canadian communities can set the path to proactively address this major challenge.



URBANISM NEXT

Where: on-line streaming

When: May 14, 2020

<https://www.urbanismnext.org/conference>

The 2020 Urbanism Next Virtual Forum is an interdisciplinary conversation about mobility as a service and e-commerce in the middle of a global disruption. The intention is to bring together an interdisciplinary group to discuss how emerging technologies shape the future of our cities. Advances in emerging technologies, such as the rise of e-commerce, the proliferation of new mobility and the growth of the sharing economy, are having profound effects not only on how we live, move and spend our time in cities, but also increasingly on urban form and development.

The debate will address the short-term and long-term impacts that a global pandemic could have on these areas. How will these changes affect equity, health and safety, the economy and the environment? How should

governments respond? What further training, awareness raising and research is needed to understand and respond to these changes?

The Virtual Forum will be followed by a series of monthly webinars starting in June 2020.



5th CONFERENCE ON SUSTAINABLE URBAN MOBILITY

Where: on-line streaming

When: 17 - 19 June, 2020

<http://csum.civ.uth.gr/>

The University of Thessaly, Department of Civil Engineering, Traffic, Transportation and Logistics Laboratory organizes the 5th Conference on Sustainable Urban Mobility CSUM2020. The theme of this year's Conference is: "Advances in Mobility as a Service Systems".

The main aim of the CSUM is the dissemination of knowledge and the exchange of good practices among researchers and practitioners in the domain of urban transportation. In particular this year, the conference proposes the following main thematic areas:

- Public transport and demand responsive systems;
- Reshaping transport modelling;
- Transformational technologies;
- Connected and autonomous vehicles and fleets;
- Accelerating deployment: Governance and business models;
- Accelerating deployment: Trials, pilots and case studies;
- Data sharing;
- Digitalization;
- Smart cities;
- Social networks and traveler behavior;
- Traffic emissions and environmental impacts;
- Smart urban logistics systems;
- Human factors;
- Infrastructure resilience.

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Engineer, Ph.D. student in Civil Systems Engineering at University of Naples Federico II. Her research topic concerns the urban accessibility. The aim is to develop a decision support tool that, on an urban scale, allows to choose the most effective actions to improve urban accessibility for vulnerable users, by contributing to improve their quality of life.

Carmen Guida

Engineer, Ph.D. student in Civil Systems Engineering at University of Naples Federico II. She received a master degree in Hydraulic and Transport Systems Engineering at University of Naples Federico II with a thesis on the safety performance of urban intersections, developed at University of Central Florida, Orlando (U.S.). Currently, her PhD research concerns accessibility to urban services for elderly people with the aim of minimizing social exclusion and inequalities within urban areas.

Rosa Morosini

Engineer, Ph.D. student in Civil Systems Engineering at University of Naples Federico II. Her research topic concerns the urban planning transformations and soil consumption. The purpose is to identify supporting tools for the local authorities with the aim of minimizing the use of this resource and make it a sustainable use.

Andrea Tulisi

Architect graduated in Architecture from the University Federico II in Naples in 2006. In January 2014 holds a PhD in Environmental Technology with a research focused on rehabilitation strategies for semi-enclosed spaces in the "Compact City". He was involved in the project Smart Energy Master at the DICEA department of the University of Naples Federico II. His research activity is focused on the link between urban open spaces and energy consumption.