TeMA

Journal of Land Use, Mobility and Environment

The fragile/resilience city represents a topic that collects itself all the issues related to the urban risks and referred to the different impacts that an urban system has to face with. Studies useful to improve the urban conditions of resilience are particularly welcome. Main topics to consider could be issues of water, soil, energy, etc..

Tema is the Journal of Land use, Mobility and Environment and offers papers with a unified approach to planning and mobility. TeMA Journal has also received the Sparc Europe Seal of Open Access Journals released by Scholarly Publishing and Academic Resources Coalition (SPARC Europe) and the Directory of Open Access Journals (DOAJ).

THE RESILIENCE CITY / THE FRAGILE CITY. METHODS, TOOLS AND BEST PRACTICES.

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THE RESILIENCE CITY/THE FRAGILE CITY. METHODS, TOOLS AND BEST PRACTICES

3 (2018)

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Editorial correspondence
Laboratory of Land Use Mobility and Environment
DICEA - Department of Civil, Architectural and Environmental Engineering
University of Naples "Federico II"
Piazzale Tecchio, 80
80125 Naples
web: www.tema.unina.it
e-mail: redazione.tema@unina.it

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.

The Italian *National Agency for the Evaluation of Universities and Research Institutes* (ANVUR) classified TeMA as scientific journal in the Area 08. TeMA 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.

TeMA Journal of
Land Use, Mobility and Environment

CALL FOR PAPERS: TeMA VOL. 12 (2019)

The Times They Are a-Changin'

In these last ten years, TeMA Journal has published several international studies and researches supporting the scientific debate on the urban complexity and the future challenges of urban areas. Thus, the three issues of the 12th volume will think again the debate on the definition and implementation of methods, tools and best practices connected to the evolution of the main scientific topics examined in depth in previous TeMA Journal volumes.
In detail, the Journal welcomes papers on topics about the interdisciplinary interaction among Land Use, Mobility and Environment, and also urban studies from the domains of engineering, planning, modelling, behaviour, regional economics, geography, regional science, architecture and design, network science, complex systems, energy efficiency, urban accessibility, resilience and adaptation.
Publishing frequency is quadrimestral. For this reason, authors interested in submitting manuscripts addressing the aforementioned issues may consider the following deadlines:

- first issue: 10th January 2019;
- second issue: 10th April 2019;
- third issue: 10th September 2019.

CALL FOR PAPERS: GENERAL CALL

Papers in Transport, Land Use and Environment

The Journal welcomes papers on topics at the interdisciplinary intersection of transport and land use, including research from the domains of engineering, planning, modelling, behaviour, economics, geography, regional science, sociology, architecture and design, network science, and complex systems

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planning, nature and ecosystem services

24-26 June 2019
Cagliari (Italy)

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Call for papers

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La cooperazione al cuore del Mediterraneo

TeMA Journal of Land Use, Mobility and Environment

THE RESILIENCE CITY/THE FRAGILE CITY. METHODS, TOOLS AND BEST PRACTICES

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doi: http://dx.doi.org/10.6092/1970-9870/5957

REVIEWS PAGES

THE RESILIENCE CITY/THE FRAGILE CITY. METHODS, TOOLS AND BEST PRACTICES 3(2018)

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. During the last two years a particular attention has been paid on the Smart Cities theme and on the different meanings that come with it. The last section of the journal is formed by the Review Pages. They have different aims: to inform on the problems, trends and evolutionary processes; to investigate on the paths by highlighting the advanced relationships among apparently distant disciplinary fields; to explore the interaction's areas, experiences and potential applications; to underline interactions, disciplinary developments but also, if present, defeats and setbacks.
Inside the journal the Review Pages have the task of stimulating as much as possible the circulation of ideas and the discovery of new points of view. For this reason the section is founded on a series of basic's references, required for the identification of new and more advanced interactions. These references are the research, the planning acts, the actions and the applications, analysed and investigated both for their ability to give a systematic response to questions concerning the urban and territorial planning, and for their attention to aspects such as the environmental sustainability and the innovation in the practices. For this purpose the Review Pages are formed by five sections (Web Resources; Books; Laws; Urban Practices; News and Events), each of which examines a specific aspect of the broader information storage of interest for TeMA.

01_WEB RESOURCES
The web report offers the readers web pages which are directly connected with the issue theme.

author: Rosa Morosini
Tema Lab – University of Naples Federico II, Italy
e-mail: rosa.morosini@unina.it

02_BOOKS
The books review suggests brand new publications related with the theme of the journal number.

author: Gerardo Carpentieri
Tema Lab - University of Naples Federico II, Italy
e-mail: gerardo.carpentieri@unina.it

03_LAWS
The law section proposes a critical synthesis of the normative aspect of the issue theme.

author: Maria Rosa Tremiterra
Tema Lab - University of Naples Federico II, Italy
e-mail: mariarosa.tremiterra@unina.it

04_UBAN PRACTICES
Urban practices describes the most innovative application in practice of the journal theme.

author: Gennaro Angiello
Tema Lab - University of Naples Federico II, Italy
e-mail: gennaro.angiello@unina.it

05_NEWS AND EVENTS
News and events section keeps the readers up-to-date on congresses, events and exhibition related to the journal theme.

author: Andrea Tulisi
Tema Lab - University of Naples Federico II, Italy
e-mail: andrea.tulisi@unina.it

TeMA
Journal of
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评述页：

提高城市系统对自然及人为变化顺应能力的方法、工具和最佳实践

TeMA 从城市规划和流动性管理之间的关系入手，将涉及的论题逐步展，并始终保持科学严谨的态度进行深入分析。在过去两年中，智能城市（Smart Cities）课题和随之而来的不同含义一直受到特别关注。
学报的最后部分是评述页（Review Pages）。这些评述页具有不同的目的：表明问题、趋势和演进过程；通过突出貌似不相关的学科领域之间的深度关系对途径进行调查；探索交互作用的领域、经验和潜在应用；强调交互作用、学科发展、同时还包括失败和挫折（如果存在的话）。
评述页在学报中的任务是，尽可能地促进观点的不断传播并激发新视角。因此，该部分主要是一些基本参考文献，这些是鉴别新的和更加深入的交互作用所必需的。这些参考文献包括研究、规划法规、行动和应用，它们均已经过分析和探讨，能够对与城市和国土规划有关的问题作出有系统的响应，同时还对诸如环境可持续性和在实践中创新等方面有所注重。因，评述页由五个部分组成（网络资源、书籍、法律、城市实务、新闻和事件），每个部分负责核查 TeMA 所关心的海量信息存储的一个具体方面。

01_WEB RESOURCES
网站报告为读者提供与主题直接相关的网页。

author: Rosa Morosini
那不勒斯菲里德里克第二大学民用建筑与环境工程系 TeMA 实验室 e-mail: rosa.morosini@unina.it

02_BOOKS
书评推荐与期刊该期主题相关的最新出版著作。

author: Gerardo Carpentieri
那不勒斯菲里德里克第二大学民用建筑与环境工程系 TeMA 实验室 e-mail: gerardo.carpentieri@unina.it

03_LAWS
法律部分提供主题相关标准方面的大量综述。

author: Maria Rosa Tremiterra
那不勒斯菲里德里克第二大学民用建筑与环境工程系 TeMA 实验室 e-mail: mariarosa.tremiterra@unina.it

04_URBAN PRACTICES
城市的实践描述了期刊主题在实践中最具创新性的应用。

author: Gennaro Angiello
那不勒斯菲里德里克第二大学民用建筑与环境工程系 TeMA 实验室 e-mail: gennaro.angiello@unina.it

05_NEWS AND EVENTS
新闻与活动部分让读者了解与期刊主题相关的会议、活动及展览。

author: Andrea Tulisi
那不勒斯菲里德里克第二大学民用建筑与环境工程系 TeMA 实验室 e-mail: andrea.tulisi@unina.it

01

THE RESILIENCE CITY/THE FRAGILE CITY.
METHODS, TOOLS AND BEST PRACTICES 3(2018)

REVIEW PAGES: WEB RESOURCES

ROSA MOROSINI
TeMALab – Università degli Studi di Napoli Federico II, Italy
e-mail: rosa.morosini@unina.it

In this number

GREEN AREAS GET SWALLOWED BY DESERTS: THE DESERTIFICATION PHENOMENON

Desertification is defined as "land degradation in arid, semi-arid and dry sub-humid areas, resulting from various factors, including climatic variations and human activities" (Rio, 1992). This is the innovative definition of the phenomenon (which is increasingly growing in the north Mediterranean countries) given by the United Nations Conference on Environment and Development (Rio, 1992). Its innovative nature is linked to several reasons, including that of considering desertification as the consequence of the overlapping of both anthropic and natural factors. In fact, until the last decade, this phenomenon was linked to periods of severe drought and only in the eighties it became a global problem (Iannetta, 2007).

Furthermore, desertification is one of the effects of climate change since it has increased in recent years, especially in areas affected by simultaneous precipitation and temperature variations (ISPRA, 2017). Climate change affects desertification in two different ways: on the one hand, it influences the expansion of natural deserts, on the other the increase in extreme weather events (such as floods and periods of severe drought) favours soil erosion.

To date, desertification is a widespread phenomenon, considering that the more desertified lands are vast, the faster they grow because space is removed from the natural resources that in the climate system have the function of reducing the presence of carbon dioxide in the atmosphere (which is the cause of rising temperatures), such as soil, that represents the second carbon tank after the oceans (Zucaro & Morosini, 2018).

This section presents three websites that provide data and documents to investigate the extent, causes and impacts of desertification: WAD (World Atlas of Desertification), soil maps and United Nations Environment. The World Atlas of Desertification aims to provide maps on the phenomenon of desertification and the map layers compiled using the convergence of evidence concept can be interrogated in an interactive way by the users. The soil map is a website managed by a working group belonging to the Council for Research in Agriculture and the Analysis of Agricultural Economics (CREA), which aims to provide digital databases and cartography of soils through the use of Geographic Information Systems (GIS). The third website is the United Nations Environment Programme, which is the main global environmental authority that sets the global environmental agenda and promotes sustainable development.

World Atlas Desertification
https://wad.jrc.ec.europa.eu/

The World Atlas of Desertification is an atlas composed of maps constructed from the digital cartography base of the world and Lovell Johns' maps. This atlas is an assessment of land degradation at a global level; it is the result of scholarly collaborations among various experts from institutions and universities around the world, who were able to address the phenomenon of desertification thanks to their extensive experience and knowledge. The website is easy to consult, since the home page has six sections which can be accessed by clicking directly on the reference image:

- introduction;
- global patterns of human domination;
- feeding a growing global population;
- limits to sustainability;
- convergence of evidence;
- solutions.

At the bottom right side of the home page there are three more links that give access to information about the atlas and authors and allow the users to download the full version of the Atlas. Each of the sections listed above is in turn organized into subsections that group the different maps and documents, which can be viewed digitally. The "Global patterns of human domination" section provides snapshots that illustrate the dynamic human footprint on Earth and its potential impact on the soil resource.

The snapshots are organised into two groups: human presence and globalisation. The "Feeding a growing global population" section, instead, organises the maps into three subsections, where the global expanse of agriculture and the crucial aspects of the dynamics food productions in relation to land degradation are illustrated. The "Limits to sustainability" section is divided into six subsections which contain the maps monitoring the status of soils to understand the various processes of change that can lead to land degradation, in order to define the environmental thresholds within which human actions must be maintained to avoid future catastrophes.

In the "Convergence of evidence" section there are many documents (always articulated in subsections) which illustrate the complex human-environment interactions in order to evaluate the causes and consequences of degradation, because only a good understanding of the causes and the effects of the phenomenon can provide a guidance to control or reverse desertification. Maintaining and/or improving the productive capacity of land requires a step towards land degradation neutrality.

For this purpose, in the last section, called "Solutions", there are documents which envisage actions to preserve or improve the ability of natural resources to support ecosystem functions and services. In fact, sustainable management of soil and water play a fundamental role. In each subsection there are links which give access to all the maps and the possibility to download for free the maps and the various documents of the Atlas. At the top right side of the home page there are four links which give access to the Privacy statement and to the section "Search", which is the most interesting since users are directly connected to the website of the European Commission by clicking on it.

Soil Map
http://www.soilmaps.it/en/

The soil map is a website of the Centro Nazionale Cartografia Pedologica (CNCP), which is the Italian National Center for Soil Mapping. It is well articulated and rich in data on the soils of Italy, and can be a valid support for the assessment of the risk of desertification at national level since data recovery often represents the longest part of a work aimed at measuring a phenomenon; for this reason, the assessment cannot exclude the use of existing databases. This site is organised into six sections that are easily accessible from the first page of the site:

- home, with a drop-down menu on the left side that allows access to different areas. Through this menu it is possible to find the objective of the work of the research group, the location of the research center and information about the staff. In addition, from the same drop-down menu users can access two more pages, one that displays the various technological platforms, and the other – the "Publications" section – that collects volumes and maps easy to consult and download. To the right side of this section there is a box that allows the user to make a cartography search by entering the reference city;
- soil maps; in this section, after a brief presentation (as for the previous section) users can connect through a drop-down menu - on the left side - to pages that deal with specific topics, such as the Italian Pedological Regions and Land systems. Moreover, from the same menu, other three pages are accessible: the page that provides a list of the referents for each specific theme and for each Italian region, the "Publications" page (where all the documents are available for free download) and the page directly connected to the WebGis;
- database, in which the menu on the left side displays links to different pages where users can download data and publications, always in open version;
- pedoclimate, a section which structure is similar to the previous one;
- projects, a section that presents all the projects activated by the research center, divided by macro-topics, which can be accessed from a menu on the top left side of the section itself. Among the projects in progress, there is the project "Predisposition of a National Atlas of the areas subject to desertification" which proposes to identify, on a national scale, the areas currently desertified and those that, for the climatic and anthropic processes in progress, are more at risk of desertification. The result will be a first approximation of a database of desertified areas and at risk of desertification of Italy: the areas will be classified by type of desertification process and by the presence of mitigating or aggravating conditions of the process, with a 1:100,000 scale of the reference topographic cartography;
- deposits, the last section on the top left side, which contains two links: Presentation and Publications. On the page accessed by clicking on the Presentation, after a brief description of the section, there is a link that can be used to report a deposit, including the contacts of each referent.

Moreover, on the first page of the site, in the upper right corner, there are four more sections:

- downloads, where you can download data and documents in pdf format as well as software, made available under open licenses;
- links, a section which contains the sites focused on land use and on the phenomenon of desertification of Italian regions. In addition to the regional sites, there are links to Italian associations of soil science, research institutes and links to databases on these issues;
- contacts, where users can find the references of the managers of the various CNCP projects;
- site map, a useful modeling of the articulation and the contents of the site.

United Nation Environment Programme
https://www.unenvironment.org/

The United Nations Environment Programme is a United Nations website that aims to raise awareness among all EU countries in caring for the environment, through information campaigns aimed at improving people's quality of life without compromising that of future generations.
The site is organized in different sections, available by clicking on the links at the top of the home page: Regions, About us, Work with us, Languages, Resources and Events. The "Resources" section gives access to a page where all the publications, reports and newsletters related to the topics of interest are listed on the right side with the relative links. At the top left of the page, instead, there is a box for Advanced search, where the user can search by keywords, category and resource type or by topics. It is also possible to narrow down the search field by selecting several options at the same time or adding other types of information such as the region, the country and the tags. The scrolling list on the right side is easy to consult: by clicking on the title, users are connected directly to the linked page, where they can consult and download the material of interest for free. Desertification is one of the topics covered: users have just to enter the keyword "desertification" in the box on the left to access the different articles and reports focused on this type of phenomenon, which has aroused much interest especially in the last year, considering that the first report is dated February 2017 and the last one exactly one year later. By clicking on a report users access a page where they can download the material. In addition to the link of the report download, there are links through which it is possible to access other studies of possible interest for the user who is consulting that particular report. Lastly, to the left side of each page there are links to social networks: Facebook, LinkedIn, Twitter and AddThis - email a friend.

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IMAGE SOURCES

The images are from: https://www.cosepercrescere.it/la-desertificazione/; https://wad.jrc.ec.europa.eu/; http://www.soilmaps.it/en/; https://www.unenvironment.org

02

THE RESILIENCE/THE FRAGILE CITY.
METHODS, TOOLS AND BEST PRACTICES 3(2018)

REVIEW PAGES: BOOKS

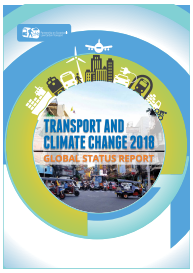
GERARDO CARPENTIERI
TeMALab – Università degli Studi di Napoli Federico II, Italy
e-mail: gerardo.carpentieri@unina.it

In this number

TOWARDS SUSTAINABLE AND RESILIENT SOCIETIES

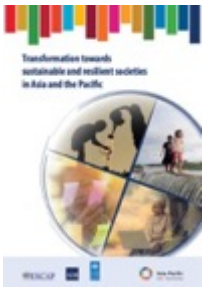
Addressing climate change is one of the major global challenges of our time. We live in a world of increasingly unpredictable and complex risks. Trends such as demographic change, rural–urban transitions, technology change and climate change are reshaping our region (Ramachandra et al., 2014). We need to be much better prepared to deal with the interlinked impacts of long-term trends, and deal with the inevitable changes the future will bring. It is increasingly urgent to understand how best we can realize the transformations that will ensure that we achieve the Sustainable Development Goals. The 2030 Agenda for Sustainable Development states global leaders' determination to "take the bold and transformative steps needed to shift the world on to a sustainable and resilient path". Transformation requires breaking through the 'path dependency' that defines the way things are done. In particular, the transport sector is a major contributor to greenhouse gas emissions; responsible for 23% of global energy-related carbon dioxide emissions. The rate of emissions from transport is increasing faster than from any other sector. Transport activity, in turn, drives transport emissions, which grew by 31% from 2000 to 2016. The growth of absolute transport emissions between 2000 and 2016 was highest in Asia (92%), Africa (84%) and Latin America (49%), driven by growth in prosperity and in passenger and freight transport activity in these regions. The technology is playing an increasing role in low carbon transport plans and target from countries, states and provinces, cities, and companies (Angelidou, 2017). In last decade, the political and corporate leadership on transport and climate change is growing in scope and intensity, within and outside of global agreements (De Gregorio et al., 2015). The actions required to strengthen resilience can be understood in terms of inter-related and complementary resilience capacities: Anticipatory capacity, the ability of human systems to anticipate and reduce the impact of shocks through preparedness and planning; Absorptive capacity, the ability of human systems to absorb and cope with the impacts of shocks and stresses; Adaptive capacity, the ability of human systems to change in response to multiple, long-term and future risks, and to learn and adjust after a shock materializes; Transformative capacity, the ability to take deliberate steps to change systems that create risks, vulnerability and/ or inequality.

According to these themes, this section proposes three works that help to better understand the topics of this number: Open Data Infrastructure for City Resilience. A Roadmap, Showcase and Guide; Transformation towards sustainable and resilient societies in Asia and the Pacific; and Transport and Climate Change Global Status Report 2018.



Title: **Transport and Climate Change Global Status Report 2018**
Author/editor: Partnership on Sustainable, Low Carbon Transport (SLoCaT)
Publisher: German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the William and Flora Hewlett Foundation
Publication year: 2018
ISBN code: -

This first edition of the Transport and Climate Change Global Status Report is intended to help ensure that low-carbon transport is a fundamental strategy in climate action at global, regional, national, and sub-national levels. Considering the implementation of the Paris Agreement on climate change, transport must inevitably play its part if global targets are to be met. The report describes recent trends in transport demand emissions, illustrates recent policy targets and measures across a number of transport sub-sectors, and sets a baseline from which to demonstrate the potential of transport to make a proportional contribution to the 1.5-degree Celsius scenario. This report is intended primarily as a resource for policy-makers to raise ambition on climate mitigation and adaptation in sustainable transport plans and programs by countries, cities, states and provinces, and private sector companies; thus, the report provides a central repository on transport and climate change data which can help to support policy-makers in setting transport planning targets. In addition, the report offers trends analyses supported by peer examples to help increase coherence among low carbon transport policies for actors at different levels of government.
In the first part, the report consists of a global overview comparing current trends in transport and climate change across three dimensions: passenger and freight transport, international aviation and shipping, and global regions with respect to transport demand, transport emissions, and low-carbon transport policy measures. In the second part, it describes recent trends in transport demand and transport emissions and illustrates potential Paris Agreement-compliant mitigation pathways. This part is divided into three parts: Part A discusses the various drivers of transport demand, considering recent trends in passenger and freight transport demand, and reports on global development of transportation infrastructure; Part B reviews transport emissions growth by mode and region, and explores transport energy intensity, carbon intensity of fuel, and other impacts; and Part C discusses transport emissions projections and mitigation potential. In the third part, it describes frameworks for transport and climate change planning through the United Nations Framework Convention on Climate Change mitigation and adaptation planning processes, along with low carbon transport policy targets and measures across eight major policy areas, which are illustrated by recent examples from a range of global regions including extensive case studies from the Global South. In the four part, it summarizes global investment in the transport sector and examines the current level of investment from four sources: the public sector, the private sector, official development assistance (ODA), and climate finance. The funding gap between the current level of investment and projected future needs in the transport sector is highlighted as well. This report is not intended to make policy recommendations, nor does it advocate the use of any particular low carbon transport measure, mode, or technology. Data are drawn from the most recent publicly-available source to populate a set of key indicators, which are to be refined and expanded in the future. As available data are not consistently robust for each of the eight policy areas, the report maintains indicators to highlight existing gaps with the goal to support future data collection efforts. Mode shift and emission reduction impacts for implemented measures in each of the eight policy areas are quantified where possible, data sets are currently limited for most of this policy areas.



Title: **Transformation towards sustainable and resilient societies in Asia and the Pacific**
Author/editor: The Economic and Social Commission for Asia and the Pacific (ESCAP)
Publisher: United Nations and Asian Development Bank
Publication year: 2018
ISBN code: 978-92-9261-115-6

This report takes stock of the changing nature of risk in Asia and the Pacific, and the stresses, shocks and opportunities that are affecting a diverse region's prospects for achieving the SDGs. It quantifies the effects of selected natural hazards, commodity shocks and pollution shocks on the region's fundamental human systems. It highlights practical efforts being made by citizens, civil society, government and the private sector to build resilience capacities. This study identifies three barriers to transformation that make change difficult. The first is inadequate human and institutional capacity; the second is institutional rigidity, which diminishes institutions' capacity to evolve; and the third is inadequate social momentum for change. Socio-cultural factors, gender and other dimensions of inequality, and imbalances in access to decision-making also affect prospects for transformation.

The report contributes to regional and global dialogue on the theme of the 2018 high-level Political Forum on Sustainable Development, "*Transformation towards sustainable and resilient societies*", from an Asia-Pacific perspective. It explores how resilience thinking can strengthen public policy to enable the transformation towards sustainable societies envisaged by the 2030 Agenda for Sustainable Development.

- Chapter 1, sets out the relevance of the theme for achieving the 2030 Agenda in the Asia-Pacific region, and the steps needed to build the four key resilience capacities: absorptive, adaptive, anticipatory and transformative. It presents a three steps approach for incorporating resilience into policymaking that: (1) identifies risks; (2) explores the potential impacts on human systems and vulnerable groups; and (3) identifies policies and institutional responses that build these resilience capacities.
- Chapter 2, explores the first two steps, reviewing the main underlying sources of risks in the region. It assesses the impacts of various types of recurrent shocks on human systems in the region, with a focus on the most vulnerable people in society;
- A Special Feature of the report takes stock of the situation in the region with respect to the SDGs that explicitly refer to resilience;
- Chapter 3, supports the final step: the identification of policy and institutional responses. It shows how each of the four different types of resilience capacity can be built, presenting a range of examples of policies and programmes, from across the region, that have proven effective. It draws conclusions on the key characteristics that individuals, organizations and societies need to become resilient;
- Chapter 4, concludes the report by considering opportunities to support transformation for resilience, particularly through regional cooperation.

It shows how capacity-building and institutional interventions – from the household level through the community level to the national level – can increase resilience. It underlines that the likelihood of achieving some of the most urgent transformations advocated by the 2030 Agenda can be increased by better understanding the context of risk and focusing on resilience-building. It has stressed opportunities to support transformations that can support more resilient development, including through a focus on learning, deeper stakeholder engagement, innovative partnerships and financing for resilience.

Title: **Open Data Infrastructure for City Resilience. A Roadmap, Showcase and Guide**
Author/editor: Resilience Brokers, GeoSUMR, OpenNorth and Esri
Publisher: UNISDR Making Cities Resilient Campaign
Publication year: 2018
ISBN code: -

This publication contributes to the Making Cities Resilient campaign, launched by the United Nations Office for Disaster Risk Reduction (UNISDR) 2015-2030 at the local level and partners since 2010. It has been developed as a resource for cities that include urban planning, risk reduction, resilience building and civil contingency. It has been designed to help cities to integrate open data policies and infrastructure into their wider city data strategies and the development of their resilience action plans. The Roadmap, Showcase and Guide have a particular focus on open data, risk analysis and response that resilience action planning requires. This publication also highlights how investments in open data-based approaches combined with the use of geospatial data and geographic information systems (GIS) software can generate strong resilience benefits for city authorities. Also, the publication is a part of a suite of new tools that are oriented toward the 10 aspects essentials for making cities resilient, a ten-point checklist developed for the making cities resilient campaign by leading urban resilience experts.

The structure of the publication is composed of three section Roadmap, Showcase and Guide. The section A, two key assessment tools for understanding the level of data maturity of a city are presented, alongside a set of tried and tested approaches. In the section B, it includes use cases from a range of developed and developing country cities. In the last section C, it covers cross-cutting issues such as how to develop crowdsourced mapping, data standards, open innovation and risk communication.

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03

THE RESILIENCE CITY/THE FRAGILE CITY.
METHODS, TOOLS AND BEST PRACTICES 3 (2018)

REVIEW PAGES: LAWS

MARIA ROSA TREMITERRA
TeMALab – Università Federico II di Napoli, Italy
e-mail: mariarosa.tremiterra@unina.it

In this number

TOWARDS INTEGRATION BETWEEN DISASTER RISK REDUCTION AND CLIMATE CHANGE ADAPTATION IN THE EUROPEAN UNION

Climate change, urbanization, population growth, and environmental degradation strongly affect the urban capacity to effectively respond to severe natural events. At the international level, the Sendai Framework for disaster risk reduction 2015-2030, adopted by United Nations (UNISDR, 2015), try to provide a first common policy reference and a basis for the development of a resilient sustainable development agenda for better managing the consequences of these issues. Furthermore, one of the issues addressed by the Sendai Framework refers to the link between Disaster Risk Reduction and Climate Change Adaptation. In the past Climate Change Adaptation and Disaster Risk Reduction were considered different and separate concepts. In particular, while Climate Change Adaptation meant to increase the social and infrastructural capacity of the territories to respond to the future climate changes, Disaster Risk Reduction was addressed to act on the three components of the risk concept – hazard, exposure and vulnerability – and reduce them, and especially the vulnerability, for adverse events. However, several researchers (i.e. Balaban & Şenol Balaban, 2015; Norton et al., 2015) and policy documents highlight that Climate Change Adaptation and Disaster Risk Reduction are strictly linked. As highlighted by the Hygo Framework in 2007, indeed, risk reduction is a means to adapt to climate change impacts since climate variability represents a source of risk. In this perspective, Climate Change Adaptation can be considered a component of the broad Disaster Risk Reduction agenda (ProAct Network, 2008). It is possible to identify various relationships between Climate Change Adaptation and Disaster Risk Reduction (ProAct Network, 2008). For examples, both aim to build resilience in the face of hazards and have to be integrated into relief, recovery and development plans and policies and thus require multi-stakeholder participation. Furthermore, from an operative viewpoint, in order to achieve the common goal of Climate Change Adaptation and Disaster Risk Reduction, they recognize:

- the need to define and implement measures at the local level;
- a starting point in the knowledge of existing conditions of risk and climate variability;
- the benefits of environmental management measures for future risk reduction;
- the importance of the risk analysis for defining effective actions.

Nevertheless, Disaster Risk Reduction and Climate Change Adaptation have also differences. For example, while Disaster Risk Reduction has a well-defined theoretical profile, Climate Change Adaptation is mainly based on practical local applications. Besides the Sendai Framework, other international documents pay attention to

the Disaster Risk Reduction and Climate Change Adaptation' integration, including the UNFCC Paris Agreement and the UN Sustainable Development Goals, both adopted in 2016.
In this context, considering the increase of disasters in its territories, the European Union has started to take into account this need to adapt to climate change in order to reduce the disaster risks. In particular, since 2001 the European Union has adopted a set of documents that put in relationships these two aspects. They are the EU Climate Adaptation Strategy (2013), the EU Civil Protection Mechanism (2001), the EU Action Plan on the Sendai Framework for Disaster Risk Reduction (2016), the EU Floods Directive (2007) and the EU Green Infrastructure Strategy (2013). In order to understand in which way the European Union is addressing the integration between Climate Change Adaptation and Disaster Risk Reduction with a specific reference to the urban planning implications, in this issue two European legislative framework are described. The first one is the Commission Staff Working Document "Action Plan on the Sendai Framework for Disaster Risk Reduction 2015-2030. A disaster risk-informed approach for all EU policies". Since the European Union played a key role during the negotiations for the definition of the Sendai framework, the Action Plan includes a set of operative addresses for the implementation of the Sendai priorities. Secondly, the European Commission's Communication "Strengthening EU Disaster Management: rescEU Solidarity with Responsibility" is illustrated. This document integrates the EU Civil Protection Mechanism established in 2001 for supporting Member States during disaster events.

ACTION PLAN ON THE SENDAI FRAMEWORK FOR DISASTER RISK REDUCTION 2015-2030

The Sendai Framework is a voluntary instrument that was adopted by the United Nations in 2015 and aims at preventing new and reducing existing disaster risks by using an integrated approach. In particular, the adoption of its "priorities" can have effects in the reduction of vulnerability and increase of resilience of a territory. This instrument is the result of a policy concertation at the international level during which the European Union played a leading role.
In order to pursue the international targets and develop a "disaster risk-informed approach" to take forward the EU disaster risk management agenda and to reinforce efforts to increase resilience to shocks and stresses in Member States, in 2016 the European Union adopted the Action Plan on the Sendai framework.
According to the Sendai Framework, the Action Plan takes into account the four priorities as a starting point:

- Sendai Priority 1. Understanding disaster risk;
- Sendai Priority 2. Strengthening disaster risk governance to manage disaster risks;
- Sendai Priority 3. Investing in disaster risk reduction for resilience;
- Sendai Priority 4. Enhancing disaster preparedness for effective response to "Build Back Better".

In a fragmented way, several EU initiatives have already contributed to implement these four priorities. However, the Action Plan identifies a new approach that consists of four key areas based on the Sendai framework:

- Key Area 1. Building risk knowledge in EU policies;
- Key Area 2. An all-of-society approach in disaster risk management;
- Key Area 3. Promoting EU risk informed investments;

- Key Area 4. Supporting the development of a holistic disaster risk management approach.

The Key Area 1 responds to the Sendai Priority 1 and provides the following "implementation priorities": the promotion of the collection and sharing of baseline loss and damage data; the use of scenarios and risk assessments for better preparedness to existing or possible risks; the engagement with the research community in order to address disaster risk management and encourage "the science-policy interface in decision-making". Instead, in order to respond the Sendai Priority 2, the Key Area 2 is characterized by three main "implementation priorities" that are: the improvement of risk awareness and education, as a mean for reducing disaster risks and better managing their impacts; the active engagement of authorities, communities and civil society for developing inclusive local and national disaster risk reduction strategies; finally, the strengthening of the links among disaster risk management and climate change adaptation. In particular, with regards to this last priority, the Action Plan highlights the key role that urban policies and initiatives assume for a better integration of disaster risk management and climate change adaptation. However, this role seems to be also shared with the implementation of "biodiversity strategies". According to the Sendai Priority 3, for the Key Area 3 the Action Plan defines five implementation priorities that are mainly related to the promotion of risk-informed investments and risk insurance but includes also the implementation of ecosystem-based approaches for disaster risk reduction. Finally, the Key Area 4, related to the last Sendai Priority, considers the ex-post disaster actions and defines as main implementation priorities: the integration of cultural heritage in the national risk reduction strategies; the improvement of the preparedness and response capacities for disasters that can have health consequences; the support to a better integration of transnational detection and early warning and alert systems for improving the disaster preparedness and response action; finally, the promotion of the "Build Back Better" that means a stronger, faster, and more inclusive post-disaster reconstruction in order to avoid or reduce future disaster risk (Hallegatte et al., 2018).

With regards to each implementation priority, the Action Plan identifies specific activities to carry out until 2020. In particular, in order to improve the "*understanding of disaster risk management in urban settings and enhanced support and contribution to disaster-resilient towns and cities*", the main activities identified by the Action Plan are the following ones:

- develop guidance and methodologies, learn from good practices and address the needs of vulnerable groups in communities in order to define urban resilience policy and practices;
- support cities in partner countries that are mainly exposed to risks in order to strengthen their capacities in addressing disaster risks at the local level and in developing and implementing national disaster risk reduction and climate change adaptation strategies;
- integrate disaster risk management policy and practices into the European Urban Agenda and in the several European initiatives that refer to cities (e.g. Covenant of Mayors for Climate and Energy, Smart Cities, etc.).

STRENGTHENING EU DISASTER MANAGEMENT
RESCEU SOLIDARITY WITH RESPONSIBILITY

In recent years, the European Union is facing heavy impacts due to intense and unpredictable extreme natural events. These events have different consequences in terms of loss of life, destruction of properties and cultural heritage. Furthermore, the current climate variability, better known as "climate change", plays an important

role in exacerbating the magnitude of natural disasters. Therefore, starting from 2001 all the Member States were included in the EU Civil Protection Mechanism that aims at fostering cooperation among national Civil Protections. However, considering the increase of natural and weather disasters in Europe, in 2017 the EU Commissions publishes the Communication "Strengthening EU Disaster Management: rescEU Solidarity with Responsibility" which states the need of a review to the current EU's civil protection response in order to strengthen it. As defined in the Communication, the main changes will refer to the following objectives:

- "Reinforce the EU's and Member States' collective ability to respond to disasters, and address recurrent and emerging capacity gaps, by putting in place a dual system of response capacity: a dedicated reserve of response capacities with command at control at Union level, to be known as rescEU; and a more effective and dynamic contribution from Member States through a European Civil Protection Pool";
- "Strengthen the focus on prevention action as part of the disaster risk management cycle, as well as reinforce coherence with other key EU policies acting, inter alia, in the field of climate change adaptation, disaster prevention and disaster response";
- "Ensure the Union's Civil Protection Mechanism is agile and effective in its administrative procedures in support of emergency operations".

In order to respond to these objectives, seven key actions are identified. They include greater coordination between the European Commission and Member States in order to increase prevention and preparedness during disasters and endorse a more cross-sectoral approach in this field. Furthermore, the European Commission highlights the need to coordinate the disaster management with other EU policies among which the climate change adaptation. Indeed, the EU Strategy on Adaptation to Climate Change can work in synergy with disaster risk management since climate change adaptation represents a "mean" to prevent the externalities of disasters. This integration has to take into account various tools and instruments that Member States have at their disposal, including specific EU funds. About the improvement of the Civil Protection mechanism, the Communication identifies nine key actions that include various tasks, among which:

- the launch of a Communication and an Advocacy Campaign on disaster prevention "with a particular focus on forest fires, heat waves and other climate-induced extreme weather events, to improve awareness of preventive action";
- the promotion of a more systematic collection and dissemination of loss data, the enhancement of the loss data collection and the use of loss data for optimising prevention and climate adaptation planning.

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The images are from: Fig.1 http://unfccc.int/files/adaptation/groups_committees/adaptation_committee/application/pdf/techpaper_adaptation.pdf; Fig.2 https://goo.gl/images/zVB69T; Fig. 3 https://goo.gl/images/pyJCC8

04

THE RESILIENCE CITY/THE FRAGILE CITY.
METHODS, TOOLS AND BEST PRACTICES 3(2018)

REVIEW PAGES: URBAN PRACTICES

GENNARO ANGIELLO
TeMALab – Università degli Studi di Napoli Federico II, Italy
e-mail: gennaro.angiello@unina.it

In this number

PLANNING FOR RESILIENCE IN SOUTH AMERICA: TWO CASE STUDIES

With a greater concentration of people and assets in urban areas, cities need to address an increasingly complex range of shocks and stresses to safeguard development gains and well-being. Managing disaster risk and the impacts of climate change have long been an important focus of urban resilience (Galderisi, 2014; Galderisi et al., 2016), but recent examples have shown how economic crises, health epidemics, and uncontrolled urbanization can also affect the ability of a city to sustain growth and provide services for its citizens, underscoring the need for a new approach to resilient urban development.

In response of these concerns, in the last few decades, researchers from different disciplines have started investigating the meaning, aspects and elements of urban resilience, suggesting that resilience is a complex and multifaced concept with wide implications for planning practices (Salat & Bourdic, 2012), also arguing that achieving resilience in urban areas requires a strong partnership between local governments, research centres, the non-profit sector, businesses, and communities (Stumpp, 2013).

Within this context, several initiatives involving both public and private stakeholders have been created in the last few years, aimed at fostering resilience in urban areas. A notable example in this direction is the *100 Resilient Cities* initiative, pioneered by the Rockefeller Foundation. The initiative represents one of the most remarkable effort to helping cities around the world become more resilient to the physical, social and economic challenges that are a growing part of the 21st century.

The *100 Resilient Cities* programme defines urban resilience as "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".

Based on this definition, a "City Resilience Framework" (CRF) has been established. The framework provides an innovative model for the local authorities to develop a holistic city strategy in collaboration with adjacent municipalities, local academic institutions, private stakeholders, and communities of the city and represents the foundation for the developments of a city resilient strategy. The programme has been established in 2013, in honour of Rockefeller's 100th anniversary and had initial funding of $100 million (although the level of funding support has grown since the programme was launched). Since then, 102 cities worldwide have joined the programme, and 37 Resilience Strategies (with nearly 1,900 concrete actions and initiatives) have been developed. This contribution presents two relevant Resilient Strategies, developed in two South-American capitals, within the 100 Resilient Cities framework: i) the Quito (Ecuador) Resilient Strategy and ii)

the Santiago (Chile) Resilient Strategy. Beside pertaining to the same geographic area, the two cities have been selected because they share a great portion of physical, social and economic challenges, including:

- an inadequate transportation system;
- sprawl and uncontrolled urban growth;
- environmental degradation;
- persistent social inequalities.

Furthermore, both cities have faced in the past (and might face in the future) volcanic and hearth-quake hazards.

Quito is the capital city of Ecuador and has an urban population of 2.67 million inhabitants. The city not only boasts a rich history and cultural patrimony, represented by its word-famous historic center (that received recognition as the first UNESCO World Heritage Site in 1978), but also an incredible wealth of biodiversity. The city has been exposed in the recent years to a wide range of acute shocks including earthquakes, volcanic eruptions and economic crises. Beside these shocks, there are other, smaller-magnitude and more frequent shocks like floods and forest fires. At the same time, the city continues to be affected by chronic stresses such as social exclusion, environmental degradation, lack of an efficient transportation system, and lack of a diversified economy that provides job opportunities. In order to face these and other relevant urban challenges, on October 2017, the city of Quito released its Resilience Strategy with the support of the *100 Resilient Cities* initiative. The strategy is based on 5 main pillars, 16 goals and 64 tangible actions:

- *Pillar A, Inclusive and empowered citizens* - This pillar is in response to the need to consolidate participatory processes as vectors of democracy, validate the public administration's work, and facilitate processes of co-responsibility between citizens and the municipality. To reach these aims several coordinated actions are considered in the strategy, ranging from the development of a digital platform aimed at supporting citizens participation in the decision-making process, to the activation of public areas regeneration projects finalized at creating safe and functional public spaces trough the collaboration of citizens, private stakeholders and the Quito municipality.
- *Pillar B, Robust and Sustainable Environment* - This pillar concern with the environmental dimension of urban resilience and proposes developing efficient, participatory administration mechanisms aimed at managing natural and seminatural areas and urban parks while increasing citizen environmental awareness. To address these objectives the strategy includes a green infrastructure program aimed at regenerate and create new green areas within the city, giving particular attention to deprived neighborhoods. It also includes a communication campaign in which citizens themselves can experience the benefits of nature and understand the importance of personal and collective contributions to reducing the city's environmental footprint.
- *Pillar C, Integrated and Compact City* - Scattered and uncontrolled urban sprawl is a problem that makes Quito segregated and inefficient. This third pillar controls urban sprawl, maximizes the positive impact of building the first Quito metro line, and creates an integrated and efficient mobility system

that favors active mobility. A number of coordinated actions are proposed to meet this goal. These include: i) the development of a comprehensive plan for transit-oriented development (TOD), finalized at organizing and maximizing the benefits associated with public transportation by creating dense, mixed-use settlements in the areas surrounding the new metro line stations; ii) the development of a technological tool that makes it possible to monitor dynamics involving real estate development (height and extension) using satellite images; iii) the implementation of the Urban Partial Plan for the Quito Historic City Center aimed at maintain and improve the quality of life for city center residents and visitors, coordinate different means of transport and all associated development, and develop conservation, participation, and occupancy plans and iv) the development of a new low environmental impact construction regulation finalized at incentivizing real estate projects to incorporate environmental efficiency principles into construction through regulations.

- *Pillar D, Resourceful and Solid Economy* - Building economic resilience begins by strengthening productive sectors and diversifying lines of business, all with an environment-friendly focus. This fourth pillar creates an economic environment conducive to strengthening job supply and demand, with a special focus on youth. It fosters a diverse, sustainable, and innovative economy, and promotes the food-related economy as the backbone of development. Several actions are included within the pillar D, ranging from the creation of Special Economic Development Zone (ZED) in the proximity of the city's airport aimed at attracting new investments through tax incentives, to the development of industrial parks where incentivize the location of new business companies while regulate areas where residential, commercial, and industrial land uses coexist through zoning and city planning regulations. Emphasis furthermore is given within this pillar to incentivize urban and rural agriculture by developing specific mechanisms to improve both the quantity and the quality of production in urban gardens as well as the demand for such products;
- *Pillar E, Reflective and Safe Territory* - This pillar seeks to avoid creating new risks, mitigate existing ones, and prepare the city to confront potential natural and man-made disasters. In particular, to avoid new risk the strategy proposes the development of guidelines for new construction and reinforcing existing construction in low-income areas. For mitigating existing risks, the strategy proposes a new program to strengthen mechanisms for evaluating existing buildings and critical infrastructures. Finally, in order to prepare the city and its citizens to confront potential disasters, the strategy includes programs to i) promote neighborhood preparedness, ii) create disaster response neighborhood volunteer networks and iii) extend insurance against natural and manmade disasters.

SANTIAGO

Santiago is the capital city of Chile and has an urban population of 5.61 million inhabitants. Over the last decades, Santiago has undergone an explosive development characterized by a steady economic and a significant reduction in the levels of poverty. However, the built city has consolidated with a scenario of limited urban planning tools, resulting in disperse settlements and social and geographical segregation. The city has faced several shocks in the recent past related to its geography and climate including earthquakes, barrages, floods, thermal inversion and droughts.

At the same time, Santiago continues to be affected by chronic stresses such as security, transport and pollution, where social inequality is a factor that transcends all of these stresses. In response, the city of Santiago released its Resilience Strategy on June 2017. The Strategy is framed by 7 pillars, 21 objectives and 75 actions:

- *Pillar I, Urban Mobility: Connected Santiago* - The main objective of this pillar is to promote the use of public transport and encourage active mobility as a means to achieve a more sustainable and resilient transportation system. To meet this objective, the strategy presents a number of coordinated initiatives, including: i) the definition of a Metropolitan Authority to better meets the needs of a complex and evolving mobility system; ii) the definition of an Intermodal Development Plan, aimed at identifying the region's relevant transfer points; iii) the implementation of a fare integration model for the region's urban-rural transport system.; iv) the development of smart urban logistic solutions aimed at minimizing costs for businesses and reducing the environmental impacts of transportation and v) the renovation of pedestrians and cycling spaces through greenway projects.
- *Pillar II, Environment: Green and Sustainable Santiago* - This pillar is aimed at reducing the shortage of green areas within the city by integrating natural systems into the urban fabric, fostering a sustainable waste-management system and establishing a sustainable and equitable energy system. In particular, the City intends to target investment into green infrastructure and nature-based solutions especially in the most vulnerable neighborhoods. A sustainable waste management system is also envisioned in the strategy and is supported by the development of a waste recovering program, as well as investments in applied research. Finally, in order to establishing a more sustainable energy system, the city will lunch different initiatives targeting the reduction of energy consumption in the public sector as well as in the commercial and residential sector;
- *Pillar III Human Security: Safe Santiago* - The third pillar promotes the peaceful coexistence of Santiago inhabitants and addresses the multi-causality of crime in a collaborative, coordinated, strategic and intelligent manner. Action included in this pillar are mainly targeted toward the realization of situational prevention projects such as tele-protection systems, providing lights in unsafe areas with high public rates, renovation of empty lots, bus stops, stands, street furniture, among other things; as well as self-care promotion and citizen education;
- *Pillar IV, Risk Management: Prepared Santiago* - This pillar is devoted at design intelligent systems to mitigate risks and face emergencies, recognize and anticipate existing risks in the metropolitan area and prepare the citizenship against threats and disasters. To meet these objectives the strategy proposes the creation of the Integrated Emergency and Disaster Management Centre for monitoring, collecting, analyzing, and sharing information among institutions and for prioritizing actions in times of crisis and disasters. Furthermore, the strategy proposes the development of three specific programs: the Seismic Risk program, the Hydro-meteorological Hazard program and the Fire Prevention and Control program. Finally, the strategy proposes the creation of a network of volunteers that will be activated in case of natural or man-made disasters;
- *Pillar VI, Economic Development and Competitiveness: Global and Innovative Santiago*. This pillar is aimed at positioning Santiago as a global city by strengthen the regional ecosystem of innovation and entrepreneurship. To this end a coordinated mix of action will take place, including: i) the development of a Strategic Plan to promote the Santiago City brand; ii) the creation of an international convention center, which will attract business and thematic tourism to the region; iii) the creation of mechanism to fund startups, research and small and medium enterprises within the city-region;
- *Pillar VII, Social Equity: Inclusive Santiago* - This pillar addressed the social dimension or urban resilience ad aims at generating inclusion opportunities for those at social risk or in situations of violence. It also aims at guarantee access and standard to urban goods and services to all the

inhabitants of the region. Different programs are thus envisioned, targeting specific vulnerable social groups including children and adolescents, immigrants, and the elderly. The strategy furthermore includes an update of the Santiago Metropolitan Zoning Plan for the promotion of socio-spatial equity.

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IMAGE SOURCES

The image shown in the first page is from: www.100resilientcities.org. The images shown in the second page is from: www.naturegalapagos.com. The image shown in the third page is from: www.hellomagazine.com.

05

THE RESILIENCE CITY/THE FRAGILE CITY.
METHODS, TOOLS AND BEST PRACTICES 3(2018)

REVIEW PAGES: NEWS AND EVENTS

ANDREA TULISI
TeMALab – Università degli Studi di Napoli Federico II, Italy
e-mail: andrea.tulisi@unina.it

In this number

FROM URBAN RESILIENCE TO "EVERY MAN FOR HIMSELF" STRATEGIES

At the Resilent cities 2019 conference, which for years has been one of the most important events on this topic, another theory on the evolution of the concept of resilience appeared in the "innovation for resilience" section: it is the urban tinkering, title of a paper released this year; according to the authors of the paper urban tinkering is "a mode of operation, encompassing policy, planning and management processes, that seeks to transform the use of existing and design of new urban systems in ways that diversify their functions, anticipate new uses and enhance adaptability, to better meet the social, economic and ecological needs of cities under conditions of deep uncertainty about the future" (Elmqvist et al., 2018).

This theory comes from the analysis of the studies of François Jacob. In his essay "Evolution and Tinkering," published in Science in 1977, the scientist argues that a common analogy between the process of evolution by natural selection and the methods of engineering is problematic. Instead, he proposes to describe the process of evolution with the concept of bricolage (tinkering). In this essay, Jacob does not deny the importance of the mechanism of natural selection in shaping complex adaptations. Instead, he maintains that the cumulative effects of history on the evolution of life, made evident by molecular data, provides an alternative account of the patterns depicting the history of life on earth.

Urban tinkering is supposed to be the application of evolutionary thinking to urban design, engineering, ecological restoration, management and governance in order to "substantially complement and augment conventional urban development, replacing predictability, linearity and monofunctional design with anticipation of uncertainty and non-linearity and design for multiple, potentially shifting functions" (Elmqvist et al., 2018).

The capacity of being able to live in uncertainty, the main theme of the Taleb theory of antifragility (Angiello et al., 2018), is reached in the urban tinkering principles through new multifunctional elements able to solve a problem by themselves.

In an attempt to disengage from the determinism of the last century, unable to cope with the unpredictability and rapidity of change in the socioeconomic phenomena of contemporary society, the current scientific landscape tends to successfully welcome theories that make the ability to live in indeterminacy the main value to build the future; although they pose interesting issues, the feeling is that

these theories shift attention from the city as an interconnected organism to the city as a sum of elements. But the city as a collective phenomenon must be imagined, shared and finally the tools must be created so that this image becomes real. Furthermore, in this way the scientific community seems to raise the white flag by renouncing to make a real contribution to the development of the cities of the future. The only way to build cities that survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience, is taking responsibility for imagining the future rather than preparing places and people to face it whatever happens, by offering in other words "every man for himself" strategies.
Therefore, the selected conferences deliberately deal with different issues not necessarily related to the theme of resilience, but which basically question on the future of cities.

URBAN CHALLENGE CONFERENCE 2019

Where: Copenhagen, Denmark
When: 25 April 2019
http://www.urbanchallengealliance.com/new-index-1/#conference

European Union, with its long experience on academic mobility, plays an important role in the construction of a scientific network built on shared experiences essential to create broad and multi-cultural visions of the future cities.
One of such kind of project founded by EU is the Urban Challenge Programme where academic institutions, municipalities, and corporations converge and cooperate to address urgent challenges and sustainability issues across urban settings by offering courses to graduate students enrolled at one of the six partnering Universities-Aalto University, Copenhagen Business School, University of Edinburgh, HafenCity Universität, University of Latvia, and Sapienza Università di Roma.
Part of the program is the Urban Challenge Conference, that will take place in Copenhagen on April 25th, 2019. It will be a day to showcase results from the Urban Challenges partnerships together with influential renowned practitioners such as Justin Kliger, member of Future Cities Catapult's Digital Planning and Standards Team, Bruce J. Kats, co-Founder of "New Localism Advisors", and Aleksandra Kazmierczak, an expert in urban climate change adaptation at the European Environment Agency of Copenhagen.

URBANISM NEXT
UNIVERSITY OF OREGON

URBANISM NEXT CONFERENCE 2019

Where: Portland, USA
When: 7-9 May 2019
https://www.urbanismnext.com

In all the vision of the cities of the future, technology plays a fundamental role (Papa et al., 2015). Is not a case that, the first annual Urbanism Next Conference, held in March 2018, bringing together over 500 planners, architects, landscape architects, developers, technology experts, elected officials, academics, and many others, was focused on the topic "how technology is changing cities".
The topic was so successful that one year later technology is still the leading actor of the conference: on 7th of next May the debate will focus on the ways that technological innovations can be harnessed to achieve desired outcomes. What has been tried? What has worked? What has not worked? What should we try next?

How can the private and public sectors collaborate to ensure that desired outcomes drive technological innovation rather than the other way around?
Advances in technology such as the advent of autonomous vehicles (AVs), the rise of e-commerce, and the proliferation 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 itself. Researchers are working with leaders from the public, private, and academic sectors across North American and Europe to better understand the secondary impacts of emerging technologies on cities and ensure that governments from the local to federal level have the information they need to make informed decisions that improve equity and health outcomes, as well as help achieve community goals related to the economy and the environment.

URBAN FUTURE 2019

Where: Oslo, Norway
When: 22-24 May, 2019
https://www.urban-future.org/

Technology is not the only key to a sustainable future of our planet. The Urban Future global conference offers a different point of view on this issue: what is most important for solving the urban challenges are the people driving positive change. It is the world´s largest meeting dedicated exclusively to "city changers" – decision makers who actively, passionately and effectively make cities more sustainable. In this edition the thematic areas are changed slightly from the last year, taking into consideration all the discussions with stakeholders who are sharing their view on the most relevant topics for the future of cities.
Among the 10 tracks proposed this year, divided in 4 thematic focus (Urban Mobility, Built Environment & Architecture, Leadership and Green Business & Innovation) the following are strictly connected with the urban resilience:

- car-free City Life;
- cutting Carbon Emissions;
- green Public Procurement;
- electrification.

ECCA 2019

Where: Lisbon, Portugal
When: 28-31 May 2019
https://www.ecca2019.eu/

The Ecca 2019 Conference offers a more concrete and structured approach to the discussion about the future of cities more focused on the climate risk management. Data, co-productions and communication are the main topic driving the discussion together with the following themes:

- institutions, governance, citizens and social justice;
- global climate challenges;

- climate risk management and resilience.

Each theme is articulated around specific questions that will drive the discussion in order to return a detailed picture of the research in these issues. Some of the more interesting questions of the conference are shown below:

- what are the examples on using seasonal forecasting and regional climate change projections in climate change vulnerability and risk assessments?
- how should we evaluate the success of adaptation options?
- how can we involve citizens to improve and implement adaptation solutions?
- what tools are available to access useful and credible climate data, information and knowledge on climate vulnerability and risk?
- how can we increase trans-boundary collaboration and solutions?
- what are the roles of climate change adaptation and disaster risk reduction in facing this century's societal challenges?
- what are current and needed innovative solutions to increase climate resilience in cities?

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IMAGE SOURCES

The image shown in the first page is taken from:

https://www.keepcalm-o-matic.co.uk/p/keep-calm-and-every-man-for-himself-2/

AUTHORS' PROFILES

Gennaro Angiello

Engineer, Ph.D. in Civil Systems Engineering at the Federico II University of Naples. His research interests are in the field of accessibility analysis and modeling, land-use and transport interactions and sustainable mobility. He is currently involved in the research project Smart Energy Master and in the COST Action TU1002 accessibility Instruments for Planning Practice in Europe.

Gerardo Carpentieri

Engineer, Ph.D. in Civil Systems Engineering at University of Naples Federico II. Research Fellow of Land Use Planning at the Department of Civil, Architectural and Environmental Engineering at University of Naples Federico II. He received a master's degree in Environmental and Land Engineering with a thesis on "The integrated government of land use and mobility for environmental sustainability in the metropolitan areas: evaluation techniques of different scenarios for the city of Rome". In July 2013 he won a scholarship within the PRIN project on the "Impacts of mobility policies on urban transformability, environment and property market". He is currently involved in the research project "Smart Energy Master" at the Department of Civil, Architectural and Environmental Engineering – University of Naples Federico II and in the COST Action TU1002 Accessibility Instruments for Planning Practice in Europe.

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.

Maria Rosa Tremiterra

Engineer, Ph.D. student in Civil Systems Engineering at University of Naples Federico II. She received a master's degree in Architecture and Building Engineering with a thesis on sustainable mobility in the European cities. In 2014, she won a one-year grant for post-lauream education and research within the Project Smart Energy Master at the Department of Civil Engineering, Building and Environmental Engineering, University of Naples Federico II.

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 is currently 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.