



HAL
open science

Balancing heritage conservation and sustainable development: the case of Bordeaux.

Federica Appendino

► **To cite this version:**

Federica Appendino. Balancing heritage conservation and sustainable development: the case of Bordeaux.. World Multidisciplinary Civil Engineering-Architecture-Urban Planning Symposium – WMCAUS 2017, 2017, Prague, Czech Republic. 10.1088/1757-899X/245/6/062002 . hal-01493100

HAL Id: hal-01493100

<https://hal.science/hal-01493100v1>

Submitted on 24 Nov 2021

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

PAPER • OPEN ACCESS

Balancing Heritage Conservation and Sustainable Development – The Case of Bordeaux

To cite this article: Federica Appendino 2017 *IOP Conf. Ser.: Mater. Sci. Eng.* **245** 062002

View the [article online](#) for updates and enhancements.

Related content

- [Built urban heritage conservation in Islamic societies: Study case in Banda Aceh, Indonesia](#)
Z D Meutia
- [Education For Sustainability - Experiences From Greece](#)
Athena Baronos
- [Sustainability assessment of shielded metal arc welding \(SMAW\) process](#)
Ibrahim Alkahla and Salman Pervaiz

Balancing Heritage Conservation and Sustainable Development – The Case of Bordeaux

Federica Appendino ¹

¹ Paris-Sorbonne, Laboratoire ENeC, France and Politecnico di Torino, DAD, Italy

federica.appendino@polito.it

Abstract. Over the past few decades sustainability concerns have positioned themselves with a central importance to the contemporary debate on the future development of cities, due to fast urbanization, increasing pollution, intensity of climate change and resource consumption. In this worldwide context, the historic city is suffering from pressures never seen before. For this reason, in the historic urban landscape urban conservation strategies have to be integrated within the large goals of sustainable development, as affirmed by the recent UNESCO's Recommendation on the Historic Urban Landscape adopted in 2011. The Recommendation reflects the actual international attention given in order to find a holistic approach, which integrates urban conservation and development in balance with social, environmental, economic and cultural sustainable considerations. Through this framework, certain questions emerge: how can urban conservation open up to sustainability whilst keeping intact tangible and intangible values and heritage? What are the strategies and policies implemented? Recognizing that sustainability is a primary challenge that urban conservation faces, this paper aims to present the case study of Bordeaux, a port city in south-western France. Since 2007, Bordeaux has been inscribed as an inhabited historic city on the World Heritage List on the basis of an outstanding urban and architectural ensemble. Yet at the same time, it has developed a series of interesting policies in order to avoid a "museification" of the inner city with the aim of ensuring a "historic living city", able to evolve and develop itself in a sustainable way over time in accordance with its heritage. For these reasons the case of Bordeaux is emblematic to demonstrate the possible adaptation of urban conservation tools in order to take into account sustainability aims and shows a great step forward in wedding heritage preservation and sustainable development, currently still far from being a common practice.

1. Introduction

Over recent years, the interest in urban sustainability has grown gaining a central importance in the international contemporary debate due to fast urbanization, increasing pollution, intensity of climate change and resource consumption. Cities are in fact the protagonists, responsible for 70 % of global greenhouse gas emissions, 60 % of global energy consumption and 70 % of global waste [1]. The emergence of these phenomena constitutes a great challenge for the historic cities where sustainability ambitions and strategies must operate in accordance with the aims of urban heritage preservation. While representing only a small part of the urbanized world, historic urban areas play a fundamental role in the formation of local identity as place of memory, tradition, social values and as magnets for economic and creativity activities [2]. Thus, in this framework, the need to approach urban



conservation in a new way and with renewed tools appears clearly in order to “better integrate and frame urban heritage conservation strategies within the larger goals of overall sustainable development” [3], both at theoretical and operative level. On this basis, the present paper aims to discuss the relationship between heritage conservation and sustainable planning through the analysis of the case of Bordeaux, a world heritage port city in south-west France.

2. Urban heritage conservation and sustainable development

Sustainable development is a complex concept which dates back more than thirty years and is seen as the essential imperative of our time [4]. Despite this, there is no single and shared definition of sustainable development and, on the contrary, the notion is rather ambiguous and vague [5]. This is particularly evident in the well-known 1987 Brundtland Report that defines Sustainable Development as the development able to “meet the needs of the present without compromising the ability of future generations to meet their own needs” [6].

Sustainability, originally based on three pillars, environmental, economic and social dimensions, has evolved through time into a more complex and holistic concept thanks to the contribution of international debates and meetings. In particular, culture was introduced as the fourth pillar of sustainable development during the Johannesburg Earth Summit of 2002, and further recognized during the World Summit of Local and Regional Leaders of 2010. Despite this, cultural aspects were historically marginalized in sustainable development goals [7].

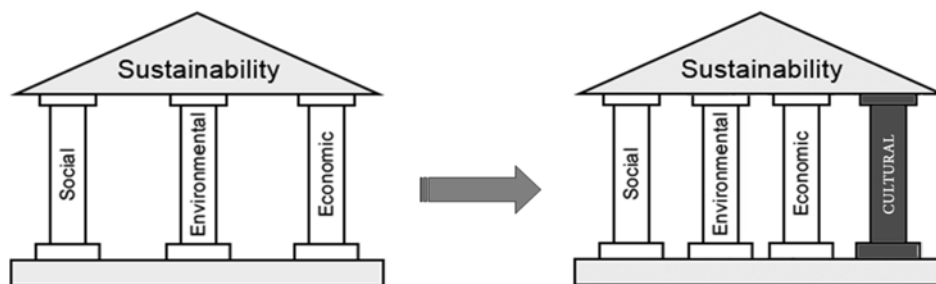


Figure 1. The sustainable development's pillars

Increasingly, there is a general acknowledgement that cultural heritage plays a crucial role in the creation of a sustainable city as a vital non-renewable resource of cities, a catalyst for social cohesion, as an identity and creativity element, as an economic attractor for tourism revenues and as a mitigation factor for climate change [8]. This clearly appears in the UNESCO's Recommendation on the Historic Urban Landscape adopted in 2011, wherein it states that “the principle of sustainable development provides for the preservation of existing resources, the active protection of urban heritage and its sustainable management is a *conditio sine qua non* of development” [9]. Nowadays the role of cultural heritage is becoming unquestioned [10] as also demonstrated by the 17 Sustainable Development Goals adopted by the UN General Assembly in 2015, in particular by the sub goal 11.4 aimed to “strengthen efforts to protect and safeguard the world's cultural and natural heritage” [11].

Nevertheless, sustainable planning and heritage conservation have frequently covered completely different spheres [12], which makes the convergence of policies, tools and aims particularly relevant today in order to achieve an integrated approach able to wedding heritage conservation and urban sustainable development. This compartmentalization has been due to the possible conflicts that there might be between the conservation aim and the sustainability ones. For instance, the difficulty of the use of renewable energies in the historic context, or the energy efficiency of the ancient buildings.

Conversely some authors who recognize these difficulties, also stress the responsibility of the conservation field that has not presented its work in a way that links it strongly to issues of sustainability and quality of life: “conservation professionals have also tended to speak among themselves and have not engaged often enough in dialogue with those who share their concerns but from different vantage points and disciplines” [13]. Since sustainable development is seen as the balance between the different dimensions, a multidisciplinary approach appears necessary to address the issue. For this reason, it is necessary to define more specifically the powerful contribution that heritage could make in actual sustainable strategies and, specifically, within each sphere [14] by engaging in dialogue the conservation field “so that conservation is not seen as some sort of nostalgic, irrelevant, elitist activity, but as central and important aspect of sustainable development and the planning and management of the built and natural, tangible and intangible” [15].

In this framework, this paper aims to present the case of Bordeaux as a possible best practice, considering the efforts made to integrate and to harmonize sustainable planning and heritage conservation, in order to stimulate knowledge exchanges and share experiences to compare.

3. Bordeaux, Port of the Moon, World Heritage Site

Bordeaux is a port city in Aquitaine, in south-western France, which covers 4.455 hectares with 242.945 habitants and 6 million of tourists in 2015. Historically identified as a city of exchange and commerce due to its port, since 2007 Bordeaux has been enshrined as an inhabited historic city, on the World Heritage List on the basis of an outstanding urban and architectural ensemble, responding to the following criteria:

- Criterion (ii): Bordeaux, Port of the Moon, constitutes an exceptional testimony to the exchange of human values over more than two thousand years. These exchanges have provided this cosmopolitan town, in the age of Enlightenment, an unparalleled prosperity that provided for an exceptional urban and architectural transformation that continued through 19th century up to present time. The different stages of construction and development of the harbour town are visible in its urban plan, especially the big transformations carried out from the early 18th century onwards.

- Criterion (iv): Bordeaux, Port of the Moon, represents an outstanding urban and architectural ensemble, created in the Age of Enlightenment, whose values have continued up to the first half of the 20th century. Bordeaux is exceptional in the unity of its urban and architectural classical and neo-classical expression, which has not undergone any stylistic rupture over more than two centuries. Its urban form represents the success of philosophers who wanted to make towns into melting pots of humanism, universality and culture [16].



Figure 2 a) Bordeaux aerial view



Figure 2 b) Bordeaux, Place de la Bourse

The uniqueness of the heritage of Bordeaux is evident not only because it is the largest World Heritage urban areas listed by UNESCO, but also because, apart from Paris, it is the city with more protected buildings than any other in France. As shown in Figure 3, the UNESCO perimeter is complex and extensive; the core zone covers an area of 1810 hectares and the buffer zone occupies a surface of 3725 hectares, corresponding to almost all the municipality limits.

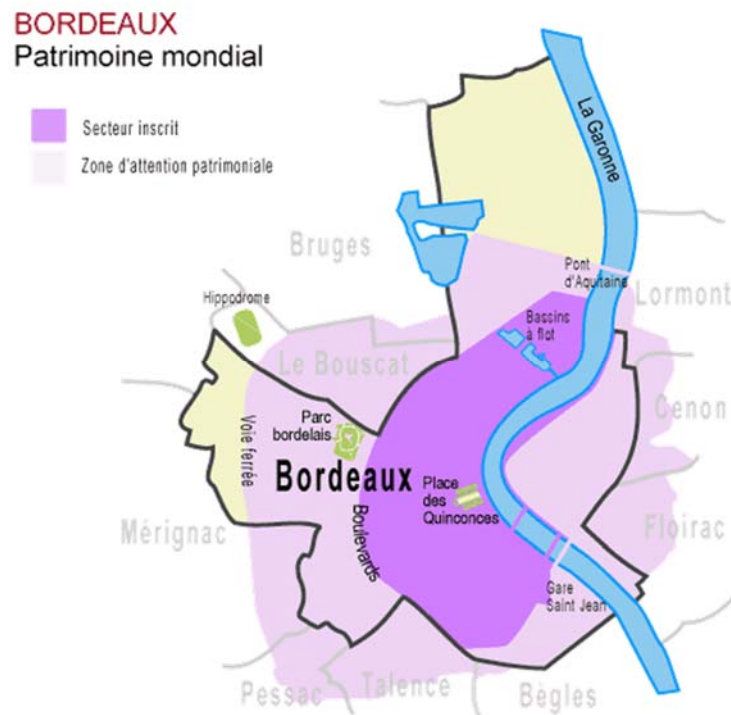


Figure 3. Bordeaux - UNESCO Core and Buffer Zone

4. Urban heritage management

The inscription on World Heritage List implies that protection measures are taken in accordance with the existing legislation of the country. This has been one of the strengths of the nomination of Bordeaux, since that almost all the urban area was covered by at least one of the following conservation tools:

- Historic Monuments [17], the protected buildings due to the public interest in their preservation for historical, architectural or artistic reasons. Bordeaux presents 58 historic monuments classified and 289 historic monuments listed.

- Historic Monuments' buffer zone [18], the 500 metres radius from a Historic Monument, protected on the idea of co-visibility and coherence with the urban surrounding.

- Safeguarded Sector [19], a conservation area created in 1967, which includes almost 150 hectares of the historic centre, accompanied by its *Plan de Sauvegarde et de Mise en Valeur* (PSMV), a master plan imposing strict controls on all works undertaken in the designated area, creating obligations for both public and private sectors and opening possibilities for the release of subsidies [20].

- *Ville de Pierre* [21], specific historic urban landscape conservation tool contained in the Local Urban Regulation Plan (PLU), which analyses more than 40.000 lots and public spaces and defines the conservation actions to be implemented.

The coordination and the imposition of these different tools was found to meet the UNESCO request of transmission of the tangible and intangible heritage to future generations and was considered as an asset of the candidature dossier by the World Heritage Committee.

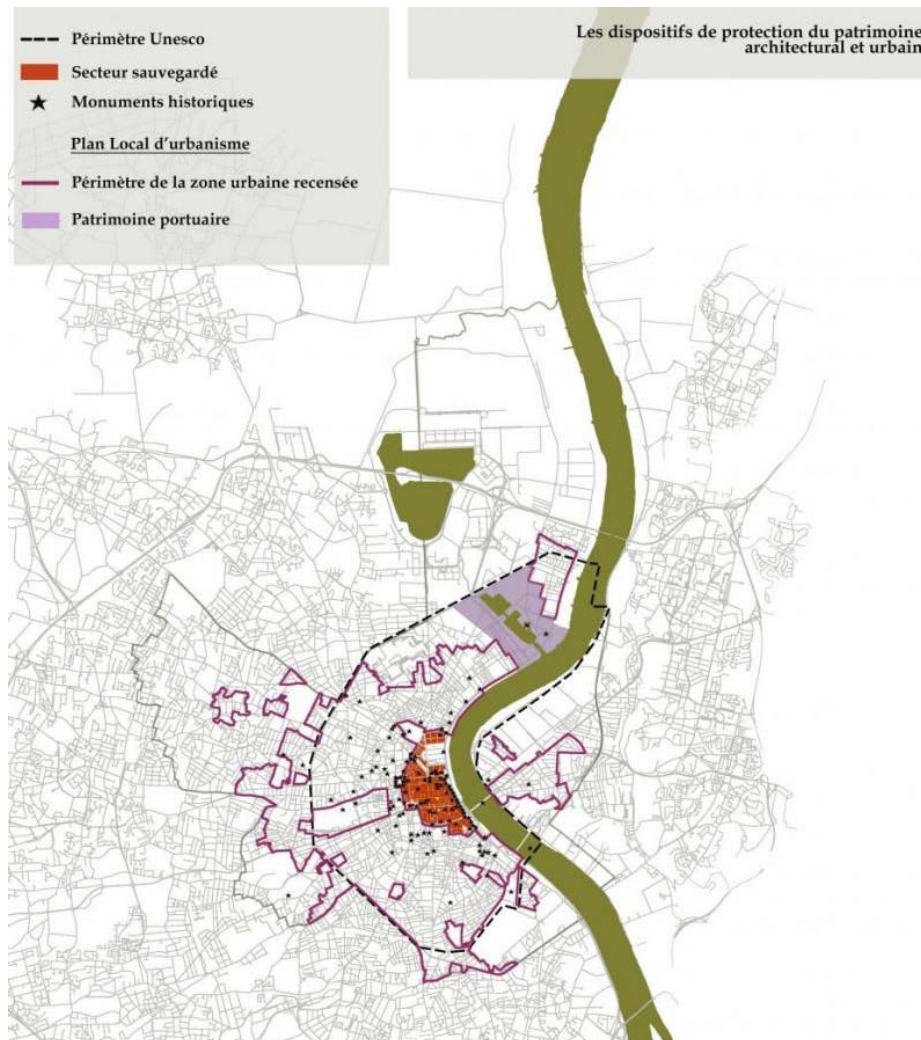


Figure 4. Bordeaux - Urban Heritage Conservation Tools

5. The historic city of Bordeaux as a sustainable living city

As shown, most of the surface of Bordeaux is protected by different tools. Although the articulation of these conservation tools assures a good level of heritage protection, on the other hand there was a risk of a “museification” of the city, by focusing exclusively on conservation and refusing any kind of transformation and change.

Nevertheless, this risk has been avoided by the city that, on the contrary, has been pursuing over the last twenty years an intense urban transformation process, with the realization of many different projects involving many different actors. Notably, among the different actions and programs carried out, two have been the central issues: the transportation system, with the implementation of a tramway network and the establishment of pedestrian zones in the historic centre, and the spatial, perceptive and cultural reconnection of the urban system with the Garonna river, focused primarily on public spaces [22]. This first “Projet Urbain” period was finalized in 2008, transforming also the image and the vision of the city.



Figure 5. Garonna river bank

More recently, the city of Bordeaux is currently involved in the “metropolitan challenge” [23], together with the other 27 nearby municipalities. This second “Projet Urbain” aims to increase the territorial attractiveness by reinforcing the position of Bordeaux internationally and at the same time by creating new urban polarities, within the global sustainability goal. From the urban planning perspective, in order to achieve this goal, the metropolis intends to improve the tramway network leading to the realization of new high performances eco-neighbourhoods, the regeneration of the historic urban centre and improvement on environmental and energy efficiency.

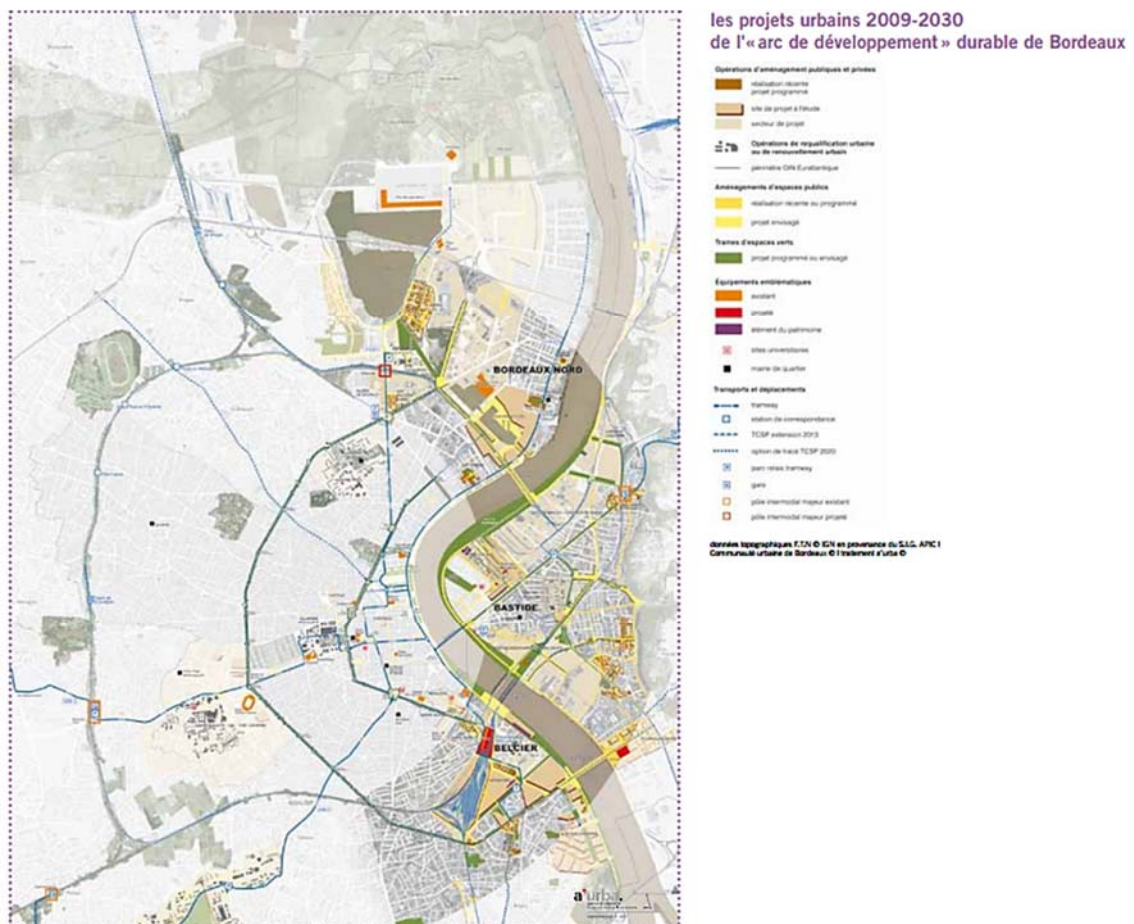


Figure 6. Bordeaux Sustainable Metropolitan Project

All these projects attach great importance to the sustainable urban development and urban heritage protection issues. It is for this reason the study of the case of Bordeaux appears to be interesting with the coexistence of both a strong and complex conservation regulatory system and urban sustainable transformation project.

Additionally, the conservation tools in place are opening up to sustainability concerns. In fact, one of the most interesting strengths of Bordeaux's urban protection policies is the battle against the "museification", with the aim of ensuring a "historic living city" [24], able to evolve and develop itself in a sustainable way over time and in accordance with its heritage. Through this lens, we can see the interesting example of the revision process of the Plan for Safeguarding and Development of Bordeaux (started in 2010) which aims to highlight the city's capacity for innovation and adaptation of French heritage policies and tools concerning sustainability concerns.



Figure 7. Bordeaux Secteur Sauvegardé

The revision, conducted jointly with the State, the Municipality and the local community of Bordeaux, affects the entire perimeter of the Safeguarded Sector and implies the inspection of more than 4.000 buildings and is still in progress to this day. The revision process has been necessary in order to take account of sustainability's imperatives and contemporary lifestyle requirements. In particular, the Plan for Safeguarding and Development must be coherent with the Sustainable Management and Development Project of the city [25], as provided in SRU Law of 2000 [26]. This Project contains the strategic directions and approaches of each territory concerning economic, social, cultural and environmental sustainable development. Thus, the revision of this conservation tool required harmonization with the following five principal sustainability goals of the entire city: urban quality based on identity and heritage protection and enhancement, environmental conservation, economic development, attractiveness, green mobility, social equity and buildings energetic renovation.

The concerned area is also affected by the programme Bordeaux [Re]centres [27], a project for a sustainable development in the entire historic urban area in response to new requirements and needs of inhabitants, which began in 2010. The goal of sustainable development is achieved by increasing the social and functional mix, by the rehabilitation of public spaces, by protecting biodiversity and by reducing energy consumption through public participation and while keeping intact urban heritage and traditional values.



Figure 8. Bordeaux [Re]Centres

Through this project, the city of Bordeaux aims to “recentre” the urban action on the city centre, in order to allow its revitalization and sustainable evolution through time.

6. Discussion and perspectives

As already seen above, the city of Bordeaux is pursuing a series of urban policies centred on sustainable planning and urban heritage protection, in an attempt to balance these two imperatives. This case reflects the French situation, where not only laws have become more ambitious in terms of sustainable development [28], but also heritage conservation has long been integrated into urban planning [29] and since the Grenelle environmental initiative [30] into the sustainable urban planning.

Among the conservation tools above mentioned, attention should be paid in the future to the UNESCO Management Plan, the strategic and operative tool concerning the protection and enhancement of heritage. In the specific case of Bordeaux, the plan includes four major objectives: the preservation of the history, identity and heritage of the city, the monitored evolution of the city centre, the harmonization of the planning and conservation tools and the internationalization of the city [31]. Therefore, in the Bordeaux Management Plan there was already the aim to find a sustainable convergence between conservation and development.

In fact, this plan has the potential to be a real urban project. This appears clearly in the recent CAP Law [32] which provides for the inclusion of World Heritage Sites and their management plan in the national heritage and urbanism laws. All the other urban planning tools must be in coherence with the UNESCO Management Plan. For these reasons, the plan has to become the meeting point of sustainable urban development strategies and heritage conservation policies, providing action guidelines for an integrated management of World Heritage cities. The new attention given to the management plan can lead to new perspectives on research and cultural exchange.

7. Conclusions

The notion of sustainable development, able to meet the needs of the present without compromising the ability of future generations to meet their own, has evolved over time into a more complex and holistic concept, which explicitly recognizes cultural heritage as a driver of sustainability. In historic urban contexts, the key factor for the conservation of historic cities as dynamic and living organisms is the integration of protection and sustainability aims, policies, actors and tools. The starting point is the realization that urban planning and urban conservation must work in tandem.

Against this backdrop, the case of Bordeaux is emblematic to demonstrate the possible adaptation of urban conservation tools in order to take into account sustainability aims. Indeed, the city of Bordeaux shows efforts to remain a historic living city, despite the high level of protection, increased by the UNESCO label. This example can be seen as a great step forward in the marriage between heritage preservation and sustainable development, which is currently still far from being a common practice.

Acknowledgment(s)

The author wishes to acknowledge the ENeC Laboratory of Paris for the encouragement and financial support and Lodovica and Lachlan for their technical support.

References

- [1] UN-HBITAT. 2013. *Planning and Design for Sustainable Urban Mobility: Global Report on Human Settlements*.
- [2] Bandarin, F. & Van Oers, R. 2012. *The historic urban landscape: managing heritage in an urban century*, Oxford, John Wiley & Sons.
- [3] UNESCO. 2011. *Recommendation on the Historic Urban Landscape*, art. 5.
- [4] Dale A. & Hill S.B. 2001. *At the edge: Sustainable development in the 21st century*, Vancouver, UBC Press.
- [5] Adams W. M. 2006. *The Future of Sustainability. Re-thinking Environment and Development in the Twenty-first Century*, Report of the IUCN Renowned Thinkers Meeting.
- [6] United Nations. 1987. *Our Common Future - Brundtland Report*.
- [7] Bandarin, F. & Van Oers, R. 2012. *The historic urban landscape: managing heritage in an urban century*, Oxford, John Wiley & Sons.
- [8] UNESCO. 2014. *Culture for Sustainable Development: Sustainable Cities*, available at: <http://www.unesco.org/new/en/culture/themes/culture-and-development/the-future-we-want-the-role-of-culture/sustainable-cities/>.
- [9] UNESCO. 2011. *Recommendation on the Historic Urban Landscape*, Preamble.
- [10] CIVVIH. 2012. *Resolutions of Naples' international symposium on the role of integrated conservation of cultural heritage for a creative, resilient and sustainable city*.
- [11] The 2030 Un Agenda for Sustainable Development recognizes the key role of heritage in making cities more inclusive, safe, resilient and sustainable (goal 11).
- [12] Bandarin, F. & Van Oers, R. 2015. *Reconnecting The City: The Historic Urban Landscape Approach and the Future of Urban Heritage*, Oxford, Wiley-Blackwell Publishers.
- [13] Teutonico, J. M., & Matero, F. (Eds.). 2003. *Managing change: Sustainable approaches to the*

- conservation of the built environment*, 4th annual US/ICOMOS international symposium organized by US/ICOMOS, April 2001. Los Angeles: The Getty Conservation Institute, p. 205
- [14] Boccardi G. 2007. *World Heritage and sustainability; Concern for social, economic and environmental aspects within the policies and process of the World Heritage Convention*, UCL Bartlett School, London.
- [15] Teutonico, J. M., & Matero, F. (Eds.). 2003. *Managing change: Sustainable approaches to the conservation of the built environment*, 4th annual US/ICOMOS international symposium organized by US/ICOMOS, April 2001. Los Angeles: The Getty Conservation Institute, p. 205
- [16] Decision 31 COM 8B.38 Nomination of natural, mixed and cultural properties to the world heritage list - Bordeaux, Port of the Moon.
- [17] The 1913 Law on Historic Monuments defined two levels of protection: classification (national relevance) and inscription (regional relevance).
- [18] The 1943 Law on Historic Monuments' buffer zones (*les abords*).
- [19] The 1962 Law, better known as Malraux Law, proposes the first detailed planning tools for urban landscape conservation and enhancement (*Plan de Sauvegarde et de Mise en Valeur*), in order to preserve historic architecture and urban values.
- [20] Versaci A. 2016. "The evolution of urban heritage concept in France, between conservation and rehabilitation programs", *Procedia Social and Behavioral Sciences*, 225, pp. 3-14.
- [21] <http://www.bordeaux.fr/p24332/ville-de-pierre>
- [22] Matteini T. 2008. "Complexity, integration and diversity of Bordeaux's urban landscape", *Rivista ricerca per la progettazione del paesaggio*, pp. 61-65.
- [23] AA. VV. 2009. *2030 Towards Grand Bordeaux, a sustainable metropolis*, Direction Générale de l'aménagement de la Ville de Bordeaux. (French).
- [24] Duchène M. 2008. *The UNESCO urban issue for Bordeaux*, in Sallenave C., *Bordeaux Unesco.*, Bordeaux: Bastingage, p.55. (French).
- [25] Projet d'aménagement et de développement durable (PADD) of Bordeaux, available at: http://fichiers.bordeaux-metropole.fr/plu/pluenvigieur/Html/2_padd.html
- [26] The 2000 Law relative to the solidarity and to the renewal urban aims to encourage a more sustainable urban development.
- [27] The project forms part of the National Programme of Rehabilitation of Historic Degraded Neighborhood (PNRQAD).
- [28] Prévost et al. 2012. "The urban planning of French cities and the challenge of sustainable town planning: improvement and limits", *AESOP 26th Annual Congress Proceedings*.
- [29] Versaci A. 2016. "The evolution of urban heritage concept in France, between conservation and rehabilitation programs", *Procedia Social and Behavioral Sciences*, 225, pp. 3-14.
- [30] The French environmental Grenelle I Law of 2009 and the environmental Grenelle II Law of 2010 had significant influence on both planning and conservation tools.
- [31] Callais C. et al. 2014. *Bordeaux, World Heritage*, La Crèche: Geste éditions.
- [32] The 2016 Law related to the Liberty of Creation, Architecture and Heritage.