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RESEARCH ARTICLE



A post-pandemic look at short-term tourist accommodations and World Heritage Site management

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ABSTRACT

Overtourism is a novel and complicated phenomenon that has hastened the rapid expansion of short-term tourist accommodations (STTA) in many European art cities. This study aims to establish a link between the rapid growth of the STTA and the likely dissemination of novel COVID-19 variations in World Heritage Sites (WHS). Using a comparative case study method, we assert that the atypical evolution of STTA renders WHS more vulnerable to novel COVID-19 variations. The findings highlight that until there are no feasible multi-sectoral and multi-level approaches to management, policy agreements on what overtourism means, and measuring tools for the proper number of visitors, the STTA issue persists, which makes WHS more vulnerable to novel COVID-19 variations in the post-pandemic time.

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Overtourism; World Heritage Sites; short-term tourism accommodations; management; post-pandemic time

1. Introduction

In recent decades, cultural tourism has been regarded as a significant aspect of rehabilitating world heritage sites (WHS), historic cities, and rural areas (Bayno & Jani, 2018). Besides, some studies have discussed the role of cultural tourism in ensuring the sustainability of historic minority-dwelled neighborhoods (Dastgerdi & De Luca, 2020; Nobre & Sousa, 2022; Shirvani Dastgerdi & De Luca, 2018). It has been assumed that cultural tourism might play a role in disseminating values and improving management strategies (Di Giovine, 2009; Labadi, 2007), and 'place image' is a crucial factor when it comes to satisfaction and encouraging cultural pursuits at the location (Dinnie, 2011; Nobre & Sousa, 2022; Shirvani Dastgerdi & De Luca, 2019a, 2019c). For instance, after the designation of a place as a WHS, the prestige of a site will increase, and potential economic benefits from more tourism will become available (Tuscany Tourist Board, 2018). In recent years, member states of the United Nations Educational, Scientific, and Cultural Organization (UNESCO) in Asia and Eastern Europe have likely prioritized this strategy (Ryan et al., 2011).

In its World Heritage Tourism Programme, the World Heritage Committee asserts that cultural tourism is a driver of the sustainability and conservation of cultural and natural heritage assets. However, recent reports indicate that the World Heritage Committee is concerned about various tourism-related difficulties in the WHS, including cultural, social, and environmental challenges (Bandarin, 2007). Indeed, if tourism is not properly

managed, it may cause cultural, social, and economic difficulties for destinations and significantly impact the local population (Lak et al., 2020; World Heritage Committee, 2014).

Cheap and low-cost options for international travel have been increasingly available in recent years due to increased competition in worldwide marketing (Alderighi & Gaggero, 2019). As reported by the United Nations World Tourism Organization (UNWTO), International tourist arrivals surged from 25 million in 1950 to 674 million in 2000. Remarkably, overseas arrivals have nearly doubled in the previous two decades, reaching 1.460 million in 2019 (World Tourism Organization, 2021). Consequently, a new issue known as 'overtourism' is impacting many popular tourist destinations, including the WHS. This phenomenon occurs whenever a large number of people go to a specific spot for various reasons (Dodds & Butler, 2019). Overtourism describes a site where an excessive quantity of tourists has led to a considerable decline in the quality of life for locals or the spatial experience for visitors (Dastgerdi & De Luca, 2022; Dodds & Butler, 2019; Goodwin, 2017; Rozmiarek et al., 2022). Weber et al. (2017) state that carrying capacity and resilience to overtourism are directly influenced by how well tourism is managed (Weber et al., 2017, p. 199). Indeed, not all areas negatively impacted by excessive tourism are dissatisfied with the current state of affairs. Agencies, shopkeepers, and even some locals have expressed contentment with the increasing number of visitors in urban areas. This phenomenon happens rather frequently. It has always been understood that some locals will benefit from more tourism while others will not, and some inhabitants will favor increased tourism while others will be opposed (Dodds & Butler, 2019). As a result, understanding the current situation, the number of visitors, and tourism management are three important concerns to address overtourism (Genç & Türkay, 2022). Meanwhile, some studies debate the future of overtourism and how it will impact the inhabitants' quality of life and satisfaction in a historic site. For instance, although Rozmiarek et al. (2022) found no evidence of overtourism in Poznan at present, they did warn that if the city's current trajectory of tourism growth continues, overtourism might become a problem in the future. Their research demonstrated that locals there felt more dissatisfaction in a part of the city with which they have had a long association (Rozmiarek et al., 2022).

In recent years, many European art cities and WHS have seen increased problems, notably in terms of Short-Term Tourist Accommodations (STTA), due to overtourism. Between 2015 and 2017, Cocola-Gant and Gago conducted a study in the historic district of Alfama and discovered that the main advantage of the STTA for landlords are the higher rental revenue and the ability to sell the property at any time without having to deal with tenants. According to the authors, the gentrification and social injustice tenants have experienced through STTA platforms is a prime illustration of buy-to-let gentrification (Cocola-Gant & Gago, 2021). In a 2017 study, two out of every five European inhabitants thought that a rise in short-term tourist accommodation (STTA) caused by overtourism had negatively impacted the city's intangible features and driven up rental prices (Gurran & Phibbs, 2017). According to Leadbeater (2017), overtourism has increased the cost of housing for locals in Barcelona. Nevertheless, the goals of cultural tourism – which aim to ensure the sustainability of a historic place through visitor spending – run counter to this trend (De Luca et al., 2020).

On the other hand, as the hotel industry continues to expand to accommodate a global clientele, it is crucial that guests get consistently high-caliber service. According to Yang

(2014), Hotel Service Quality (HSQ) is a concept used in hotel management to define the performance of hotels in terms of service quality and customer satisfaction (Yang, 2014). The HSQ performance must be continuously enhanced via management strategies and quality standards, such as the hotel star rating system (Pine & Phillips, 2005). Based on Yang's (2014) approach, we propose the term 'low-quality STTAs' to refer to those hospitality services that do not have adequate management strategies and quality standards.

The United Nations World Tourism Organization (UNWTO) forecasted a 4% rise in global tourist arrivals in 2020. However, this prediction was discarded due to the occurrence of the COVID-19 pandemic in December 2019 (World Tourism Organization, 2020). The COVID-19 pandemic has had a tremendous impact on the lives of communities and individuals all across the world. The current COVID-19 pandemic has also significantly impacted the tourism and hotel industries (Galí, 2022; Hao et al., 2020). More than 18.1 million people have confirmed infections with COVID-19 as of August 2020, and it was responsible for more than 691,000 fatalities. The number of reservations for STTA dropped by 86% between April 2018 and April 2019 due to the pandemic (AllTheRooms, 2021). Additionally, worldwide tourist export revenues were estimated to be US \$460 billion, which is almost five times lower than the level recorded before the global economic crisis of 2009 (Romano, 2021). Furthermore, it has been proposed that low-quality STTAs might serve as a conduit for the dissemination of the COVID-19 virus. A remarkable new case report published in the journal *Emerging Infectious Diseases* describes a trio of infections in a Taiwan quarantine hotel, with the virus presumably spreading through walls and floors in a poorly ventilated structure. Their findings highlight the significance of ventilation and the structural integrity of hotel constructions (Wei et al., 2022).

According to recent studies, historical sites must be prepared to respond to risks that disrupt their operations, such as the COVID-19 pandemic (Shirvani Dastgerdi & Kheyrodin, 2022). As a result, the purpose of this study is to explain how the rapid increase in STTA in some ancient Italian cities may be considered a risk that may make WHS more vulnerable to new COVID-19 variations in post-pandemic time.

2. Methodology

2.1. Method and procedure

We employ comparative case studies as a research approach to establish a link between the STTA issue and the concern about spreading novel COVID-19 variations in WHS in the post-pandemic era. Comparative case studies examine patterns that are comparable across two or more examples with something in common. As case studies, the cities of Florence and Siena, both of considerable historical value, were chosen. Secondary literature and field research methodologies were used to collect data in the historic centers of Florence and Siena. Both quantitative and qualitative methods were used to collect data. Our preliminary research focuses on how the rapid growth of STTA in recent years has affected the physical layout of Florence and Siena. Based on the Tuscany Tourist Board report in 2018 and the Municipality of Florence annual report in 2019, we examined tourist growth in Tuscany from 2012 to 2017. We also compared the maps of STTA in Florence and Siena in different years through the *insideairbnb.com* platform. The possible causes of the rapid spread of the COVID-19 virus throughout Italy are investigated in

the following section. At the end of this section, we will relate the STTA problem to the possibility of transmitting novel COVID-19 variations in WHS. Finally, we suggest guidelines that may aid local authorities and WHS site managers in regulating the STTA issue, protecting the safety of inhabitants and visitors in the post-pandemic time.

2.2. Case studies

Many European cities with rich histories have experienced the impacts of overtourism in recent years (Shirvani Dastgerdi & De Luca, 2018). This phenomenon endangers the integrity of the city's historic center and makes it difficult to find relatively affordable housing in these cities. Among these locations, we chose the historic centers of Florence and Siena in the Tuscany region.

The Historic Centre of Florence spanned 505 hectares and was named a World Heritage Site by UNESCO in 1982 (World Heritage Centre, n.d.). Like many other historic Italian cities, Florence has been more concerned about the impact of an increase in visitor numbers. The Statement of the Historic Center of Florence was revised in 2012 by the World Heritage and UNESCO Relationship Office at the Municipality of Florence to conform to the new guidelines established by the UNESCO Advisory Bodies. The WHC examined the provided document (WHC-14/38 COM/8E) and approved the Retrospective Statement of Outstanding Universal Value for Florence's Historic Center during its 38th session in June 2014. The new study highlighted some of the most pressing new threats to Florence's historic center, many of which are linked to the impacts of overtourism, such as a decrease in population, an increase in traffic, and environmental pollution. In 2016, when the management plan for the site was revised, the adverse impact of overtourism was once again highlighted (Francini, 2016). Since 2017, the University of Florence's Heritage Research Lab and the World Heritage and UNESCO Relationship Office have collaborated on several initiatives to mitigate the adverse impacts of overtourism on the city's historic center. One of these initiatives is a study called 'Study on the Load Capacity of the Historic Center of Florence.' Its goal is to demonstrate that Historic District officials understand the gravity of the overtourism issue and take appropriate preventative and corrective action (Francini & Bocchio, 2018). Overtourism was studied in five European art centers, including Florence, as part of the 2020 Atlas-World Heritage study. According to our findings, the number of low-quality STTAs in Florence has increased dramatically in recent years (Heritage Research Lab, 2019).

The Siena Historic Center is 107 ha in size and was declared a World Heritage Site by UNESCO in 1995 (World Heritage Centre, n.d.). The entire historic center is controlled by 'Decreto Legislativo 42/2004, Codice dei beni culturali & del paesaggio,' the national law preserving cultural heritage. The Municipality of Siena approved the city's first management plan in May 2011. The historical center serves as the main point of the community's identity, embodying the area's economic activity and social expression. Historical interactions between the walled city and the surrounding agricultural area have been preserved thanks to the urban planning strategies that have been adopted over time. For the sake of preservation, legislation was enacted that mandated permission from the appropriate Soprintendenze before any work could be done at a specific monument (peripheral offices of the Ministry for Cultural Heritage and Activities). The local government permits specific interventions, but the Soprintendenze's objective is to monitor change on

the site. Under this rule, the Soprintendenze can turn down proposed changes to protect the environment and limit interventions (UNESCO World Heritage Centre, [n.d.](#)).

3. Findings

According to the Toscana Promozione Turistica,¹ it is estimated that more than 44.5 million people stay in hotels and other official lodgings every year in the Tuscany region. Considering the growing demand and the number of unofficial places to stay, this estimate could reach 90 million overnight stays in total (Tuscany Tourist Board, [2018](#)). Both foreign and domestic visits to Tuscany are almost equal. However, there are slightly more foreigners than Italians: 55% of foreign arrivals and 45% of Italians.

Tuscany Tourist Board's statistics show that tourists from other countries stay in Tuscany for an average of 3.4 days, while those from Italy stay an average of 3.6 days. April through October also saw high visitor numbers (Tuscany Tourist Board, [n.d.](#)). According to statistics provided by the municipality of Florence ([2019](#)), the city's visitor presence increased by 28% between 2012 and 2016. This tendency was maintained and increased by 8% in 2016 and 2017 (Municipality of Florence, [2019](#)). Since the COVID-19 pandemic has emerged as a health crisis, the WHS requires a new management framework to mitigate health risks and enhance inhabitants' quality of life (De Luca et al., [2020](#)).

In Florence, overtourism has resulted in a rapid proliferation of informal tourist accommodations. Overtourism has significantly contributed to the transformation of residential buildings into STTA in this city, and many of these hostels have been established based on an unlawful tax system and poor health quality standards. Besides, by examining the urban facades of dei Serragli in the Historic Center of Florence, Ridolfi demonstrated that around 35% of each house's area is devoted to tourist dormitories (Ridolfi, [2018](#)). Research done in the Historic Center of Florence in 2018 (Shirvani Dastgerdi & De Luca, [2019b](#)) found that 70 percent of locals thought it was challenging to find affordable lodging because of too many tourists. In addition to the housing issues, local health authorities may find it difficult to monitor the health standards of these unauthorized and rapidly expanding STTA. It is because most low-quality STTA employ the same construction and functional patterns renters face heightened public health concerns, particularly in STTA that share facilities such as kitchens, baths, and laundries in rooming houses and hostels. These include the spread of communicable diseases, the contracting of noncommunicable diseases such as respiratory illness and other bacterial infections caused by poor ventilation and excess moisture, and injury caused by environments that are not adequately maintained to address the impacts of occupancy turnover and occupant needs.

According to the Municipality of Siena ([2019](#)), the city had 340 places to stay, with a total of 7,834 beds. Forty-six percent of these beds are in hotels, while 54 percent are in non-hotel settings. Recently, Siena has seen an upsurge in the number of visitors. Arrivals were 524,204, up 2% from 2018, while presence was 1,103,788, up 4% from 2018. The percentage of used hotel beds rose by two percentage points in 2019 compared to 2018. By researching the urban facades of the Historic Center of Siena, Kokoshi determined that around 31 percent of each house's area is given to STTA. [Figure 1](#) depicts how mass tourism depletes the city's housing stock and infrastructure, resulting in a vulnerable environment to viral diseases.

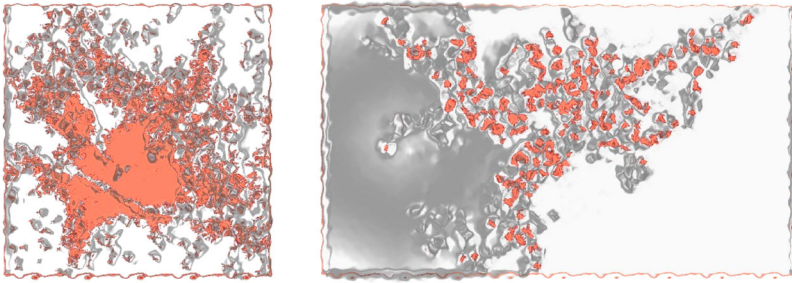


Figure 1. The rapid growth of STTA in Italian art cities: the Historic Center of Florence on the left (Inside Airbnb, 2019); and the Historic Center of Siena on the right (Kokoshi, 2020).

COVID-19 is a respiratory virus that is disseminated mostly by direct contact with an infected person and through saliva droplets, coughing, and sneezing. Another recognized method of transferring the COVID-19 virus is contacting virus-infected surfaces and touching the nose, eyes, or mouth before sanitizing or washing hands (Ministero della Salute, 2020). Del Buono et al. (2020) found that seven main factors affect how fast the virus spreads in Italy. These factors include the average age of the population, how well the health systems operate in a crisis, how easy it is to get personal protection tools, the lack of risk plans, viral mutation, timely quarantines, and surveillance tests. They also pointed out that the COVID-19 virus could spread in Italian regions through the movement of people and goods related to industries and tourism. Murgante et al. (2020) described the significant geographical, planning, and medical effects of COVID-19 in Italy. In addition to the country's high-speed trains, they identified nitrogen-related air pollution as a possible cause of the viral spread in Northern Italy and the Po Valley region (Murgante et al., 2020).

The COVID-19 pandemic has interrupted mass tourism impacts on historic cities in Italy, as tourism arrival in Tuscany recorded a 60 percent decline in 2020 (Statista, 2021). The learning of the national quarantines due to COVID-19 in Italy indicates that the origin of the viral infections can be unknown for a long time and can be propagated more swiftly through in-person encounters. The virus diseases know no geographical borders and can spread swiftly to additional places, and the absence of health standards and monitoring promotes the frequency of the virus diseases. Notably, preventive measures and guidelines are critical tools in decreasing mortality. Many nations strive to control and halt the spread of the COVID-19 virus using distinct methods. These operations include quarantine, restricting social gatherings and on-site working, closing public recreational services like pubs and bars, and suspending in-person education. The essential lesson from the COVID-19 pandemic is the importance of social distance in limiting virus transmission, which may remain for an unknown time in the post-COVID-19 time due to the uncertainty that exists in this domain (Beall, 2020).

There are various scenarios concerning the future of the COVID-19 pandemic, which makes it challenging to estimate the return time to routine. The pandemic may be considered an excellent opportunity for historic cities to regulate the long-lasting STTA issues and boost the health level of tourism accommodations to avoid the transmission of virus diseases in WHS. The established solutions for the protection of WHS have been confined to decreasing citizen mobility in accordance with lessening the transmission risks

(International Transport Forum, 2020). However, these cities require a unique conservation framework that enhances the resilience of the city (Shirvani Dastgerdi & Kheyroddin, 2022) to both emerging risks (e.g. the COVID-19 pandemic) and STTA issues.

Before the COVID-19 Pandemic, Florence used several methods to deal with the pressure of overtourism. According to the Management Plan of the historic center of Florence, some new activities have been limited or even banned in order to protect the Historic Center. More specifically, this measure puts a three-year stop on opening food and beverage businesses, permanent stores that sell food, and artisanal or industrial businesses that make or sell food (Francini & Bocchio, 2018, p. 108). As another method to decrease tourism in the historic center, the Firenze Card has been used as a promotional tool to disseminate visitors across the city. The card grants access to 72 museums, historical sites, homes, and gardens (De Luca et al., 2020). However, there is still a lack of guidelines that restrict the activities of low-quality STTA in the city.

In the post-pandemic period, the management plan of the Historic Center of Florence needs to adopt a holistic vision to improve the risk resilience of the site. The municipality has implemented various tactics for disseminating a sufficient understanding of the risks among the stakeholders. In the process of strategic planning, necessary risk management instruments like the Flood Risk Management Plan (PGRA), the Provisional Plan for Hydraulic Risk (PSRI), the Provisional Plan for Snow Risk (PSRN), and the Provisional Plan for Seismic Risk are prepared and submitted for approval. However, the Historic Center still needs a provision that addresses the health risks caused by overtourism and suggests rules for managing STTA in the city.

4. Discussion

Prior to the COVID-19 Pandemic, Italy was ranked fifth overall by the UNWTO regarding the number of international tourist arrivals (World Tourism Organization, 2019). The COVID-19 pandemic is a tremendous problem for the entirety of the world. Health organizations are keeping an eye on the spread of the virus due to the quick transmission and high fatality rate caused by the COVID-19 pandemic. In light of the absence of a vaccine and the restricted medical options available to treat this disease through the year 2020, the major approach for combating the pandemic has consisted of implementing hygiene precautions, social isolation, quarantine, and traffic limitations. As a result of the pandemic, it is more likely that social isolation and negative financial consequences will persist in vulnerable areas. Academics and physicians have voiced their concerns about the potentially detrimental implications that the COVID-19 outbreak might have on the health of the general population.

There are various hypotheses about the causes of Italy's high infection and mortality rate as a result of the COVID-19 pandemic. Del Buono et al. (2020) identify population age, the health system's efficiency, availability of personal protective equipment, viral mutation, disaster planning, prompt quarantine, and a lower testing rate as probable variables for the virus's quick response and unique breakout in Italy. They also represent national mobility and visitor movement as additional drivers of the COVID-19 virus spread in Italian areas (Del Buono et al., 2020). Although urbanization and wealth have been two significant factors that have decreased most infectious diseases over the past three decades (Wood et al., 2017), low-quality STTAs can transmit viral infections in

WHS. Therefore, this global health crisis may also provide an opportunity to find innovative ways of addressing the STTA issue in WHS. The tourism sector should shift from pre-pandemic models to ones that take into account social responsibility and the health sustainability of WHS. In this regard, locally created methods might lessen the worst of the epidemic if action is taken quickly.

Local governments and communities must be prepared to respond quickly to virus infections because when an epidemic develops, it can spread rapidly, leaving little time for additional planning (Connolly et al., 2020). Therefore, long-term funding plans for direct expenditures on improving and maintaining general health systems should be available (Munster et al., 2018). This technique will not only help track STTA and respond faster to emerging infectious illnesses in WHS, but it will also help individuals seek care. Even in Florence, the poll found that obtaining inexpensive accommodation is still a major challenge. Many Italian academics have emphasized that reducing the overstock of tourist lodgings in WHC necessitates a new legislative and administrative framework (Cuccia et al., 2016).

There are many different definitions of over-tourism, but one thing that all of them have in common is a pejorative connotation associated with the phrase, which is that it describes an excessive phenomenon. To put it another way, the primary causes of concern over overtourism are the deterioration of living circumstances as well as the environment. Besides, the effects of tourism are varied, intricate, and multifarious – overtourism results from the misuse of a destination's resources, infrastructure, or services. Visitors, commuters, and day visitors alike share these amenities, which have grown in popularity in recent years. In addition, the problems presently linked with overtourism have been influenced by broader socioeconomic trends and events. Hence, the phrase 'overtourism' is insufficient to convey all of these aspects of the phenomenon adequately. Overtourism indicates that there is some sort of regularity to tourism's consequences and that towns have a carrying capacity that tourists may overrun. It can be difficult when trying to find solutions since it makes it more difficult for many stakeholders to come to a shared understanding of the unique nature of the problem(s) within the local environment. This perspective is especially crucial given that, tourism is not the only factor contributing to overtourism and that in order to manage the problem successfully, management solutions would involve collaboration with stakeholders outside of the tourism industry, including residents. Therefore, moderating the issue of STTA in WHS, as a consequence of overtourism, needs a policy agreement about how site managers define and address this concept at an early stage.

The ways in which overtourism presents itself and how it is possible to address the problems are significantly influenced by the setting of each city; thus, interventions in the post-pandemic period need to be tailored to the specifics of the historic city. In order to accomplish this goal, the various stakeholders need to collaborate to develop solutions and improve health resilience in WHS. As a result of this strategy, the World Heritage Sites may create measurement tools to determine the appropriate number of visitors and the corresponding number of STTA needed to accommodate them.

During the past several years, STTA has rapidly grown in the historic centers of both Florence and Siena. This process has made it harder for people to find affordable housing in these cities, affecting their social welfare. In addition, most of these STTA operate under an unofficial tax system. Our study shows that no directives currently

ban low-quality STTA operations. On the other hand, since many STTA are overgrowing, health institutions cannot keep track of their health standards. Evidence from this pandemic may help us speculate how the STTA's rapid expansion could put WHS at risk for infectious diseases in the post-pandemic period. It means that the rapid growth of STTA in WHS because of overtourism is a problem for social welfare and housing and a concern for public health in a broader sense.

Two separate activities, one at the local level and one at the worldwide level, should be carried out simultaneously in order to moderate the STTA issues and improve health resilience in WHS in post-pandemic time. In this context, international organizations concerned with cultural heritage and tourism, such as UNESCO and UNWTO, need to come to an agreement on strategies that control the distribution of tourism to WHS in different seasons.

On the micro-level, WHS needs policies that engage the local community in planning practice and stop the growth of low-quality STTA. Such a restriction may help WHS to avoid overtourism and improve their healthcare resilience in post-pandemic times. The main concern at the micro-level should be to include the local community's voice in decision-making and to scale up interdisciplinary abilities to implement them (Rodwell, 2018). This micro-scale participation may offer new opportunities to work more jointly in WHS on addressing public health, social, and environmental concerns in the post-pandemic time. We assume that when local communities are informed and engaged in decision-making, they will provide high-quality STTA that not only improves the 'place image' but also protects their historic town against the spread of novel COVID-19 variants in the years after the pandemic. However, further research is needed to assess how ready property landlords are to sacrifice their financial interests for public health and welfare in WHS.

5. Conclusion

Prior to the COVID-19 pandemic, one of the most prominent problems facing many of Europe's historic cities was overtourism. As a result of this problem, STTA growth has accelerated in many old Italian towns, making it extremely difficult for residents to find housing they can afford. Practitioners in the travel and tourism sector, members of the government tourism department, and academic community members have discussed the effects of the COVID-19 pandemic on the tourism industry throughout the world. Evidence from this study implies that the COVID-19 pandemic provides an opportunity to reevaluate cultural heritage policy and improve health resilience in WHS. We aim to draw attention to the fact that the STTA problem will persist as long as there are no multi-sectoral and multi-level management approaches, policy agreements on what 'overtourism' implies, and measurement tools for estimating the optimal number of visitors. As a result, WHS will be more vulnerable to new viral diseases in the years following the pandemic. With these new perspectives, site managers may harness the global COVID-19 pandemic to advance social welfare and strengthen health security in UNESCO World Heritage Cities.

Note

1. The Toscana Promozione Turistica Agency was founded in accordance with Regional Law 22/2016 and began operations on April 1, 2016.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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