Habitability Study in the World Heritage Cities

OVPM . OWHC . OCPM

Ciudades Mexicanas
PATRIMONIO MUNDIAL

ORGANIZATION OF THE WORLD HERITAGE CITIES 2020-2021

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CREDITS

Chief Coordinator:
Jorge Ortega González,
Managing Director of the National Associartion of Mexican World Heritage Cities A.C.

Reaserch and Analysis Coordination:
Diana María Bejar Macouzet
Master in Architecture

With the participation of Daniela Calderón Porter, Luis Alberto Pérez Rodríguez and Hugo José López Carvajal.
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We thank the support given by the municipal functionaries of the participating cities in the survey, who took the time to fill the questionarie.

English translation: Juan Gabriel Trejo Flores
French Translation: Thibaut Mommalier Ferrand

ICHERISHEHER, AZERBAYAN

EXECUTIVE SUMMARY

LUAN PRABANG, LAOS

The objective of the study of habitability in the historic centers of the cities of the OWHC was to evaluate the aspects that affect the quality of life of these places and to provide data to those who make decisions that allow them to focus their objectives and public policies on actions to improve their habitability and the conservation of their tangible and intangible heritage.

For the present study, multiple methodologies were consulted and the following dimensions were adopted with dynamics related to the habitability of the sites.

The tool used in the study was the design of a questionnaire for the collection of information on elements related to habitability in historic world heritage centres, including information on the conservation of the tangible and intangible heritage of the site. The sample consisted of thirty-four cities inscribed on the world heritage list, which are part of the nine regional secretariats of the OWHC.

The questionnaire was composed of 48 questions; the answers received from the questionnaires, as well as their general scores[1], were emptied into a dynamic table[2]. The role of the table was to filter the information to compare indicators between cities and regions. Thus, the maximum score of the questionnaire is 244 points, the highest score obtained was 242.67 and the lowest was 135.66. The average rating obtained among the 34 participating cities was 186.82 points.

[1] Most of the questions were given a point value (from 0 to 4) according to their greater or lesser impact on habitability, corresponding 4 points to the answer that is considered to have the greatest positive impact on habitability, according to the methodology developed for these purposes, thus obtaining general scores for the objective of the study to identify trends and good practices.

[2] Dynamic table: It is a tool that consists of a grouped database that allows combining, buying and analyzing large volumes of data.

DIMENSION	DYNAMICS COVERING
Social Dimension	Community organization, neighborhood and traditional life, sense of place and belonging, use and dynamics of space.
Physical Dimension	Types of land use, existence of subsidies or financing for housing, degree of conservation of public and private buildings, urban landscape and environmental quality
Functional Dimension	Employment opportunities, accessibility, amenities, urban infrastructure and equipment, pedestrian conditions, functionality of public services (including public transport), etc.
Security Dimension	Crime rate, frequency of accidents, feeling of security. If the city is under terrorist threats.

Table: Dimensions of habitability. Source: Based on the methodological proposal of the Seyed Nima Libability in historic urban quarters case study: walled city of Famagusta.

In this matter, four grading intervals were established, two groups whose results are above the average and two groups with the result lower than the average.

CITIES	AVERAGE
Cities with average between 244-216 (Excellent)	4
Cities with average between 215-187 (Good)	12
Cities with average between 186-159 (Regular)	15
Cities with average 158-130 (Low)	3

Table of Findings and Associated Recommendations

FINDINGS	RECOMMENDATIONS
In several cities there is a lack of demographic information with current population figures, migration and unemployment rates within the global heritage perimeter.	Constantly update data on the composition of population groups, in order to provide information for the proper design of public policies and services in accordance with the dynamics and needs of the population.
A Failure in the area of social inclusion was found in two areas: on the one hand, the lack of accessibility for persons with disabilities in public space and, on the other, the lack of housing for all economic strata.	• Generate accessible infrastructure and equipment for people with disabilities. • Provide housing for all economic strata and other measures that generate a heterogeneous community.
From the four dimensions analyzed (social, physical, functional, security), the one with the highest average was functional (81.87%) and the one with the lowest average was social (71.45%), which indicates community neglect.	• Promote organized and active communities and conserve the intangible heritage, especially festivities and gastronomy. • Encourage the permanence of local inhabitants through cultural programs that reinforce identity and sense of belonging. • Respect the customs and customs of the community.
Eighteen cities participating in the study are below the overall average score; thirteen cities reported that tourism affects habitability as well as monumental heritage, and 18 reported that tourist housing has displaced housing.	• Managing a sustainable tourism activity, taking care of the principles of the Charter of Sustainable Tourism that include involving the host community in the planning and conservation of heritage and • in which tourism benefits the inhabitants of the locality. • Get to balance the granting of permits for the use of tourist housing with respect to other land uses, through an appropriate legal framework for new tourism dynamics, traditional accommodation services and the community.

FINDINGS	RECOMMENDATIONS
Housing is the second most concentrated land use, after trade and services, leaving health, education and sport lagging far behind.	• Comprehensively managing of the urban development that protects the use of housing land and provides the services and equipment necessary to have a good quality of life. • Making the use of housing land not a displaced or an invaded one by functions that affect the quality of life.
The most habitable cities have reported access to credit and financing so to purchase housing, as well as subsidies and incentives to preserve historic privately owned properties.	• Establishment of public policies that provide tax incentives to those who keep historic property on private property. • Grant subsidies for housing maintenance in historic buildings. • Promote and generate the conditions for the granting of credit and financing for the acquisition or restoration of housing in historic centres.
One failure was identified in the lowest-scoring cities, and it was the saturation of the role of trade, services and tourism, which has displaced essential services for the community such as education and health.	• Diversify sources of employment by innovating in other productive sectors. • Get to balance functions in historic centres through the government`s power to authorize land uses. • Promote the establishment of higher education institutions.
Cities with lower averages reported an absence of sports, cultural and green spaces.	• Create enough public, sports, cultural and green spaces. • Strengthen all programmes of social and sports activities (provide sports spaces, as this was reported to be a major lack)

FINDINGS	RECOMMENDATIONS
In the study, cities reported the use of vehicles as the main source of pollution (the historic centers in their originvwere not designed for motorized vehicles) and the most habitable cities reported pedestrian transport.	Plan an urban mobility that reduces the use of vehicles (the main source of pollution reported in the study), giving priority to pedestrian transit and public transport in historic centres.
In cities with below-average scores, the source of employment is mainly concentrated in trade, services and tourism.	• Diversify productive activities (the cities with the highest scores reported up to 9 different productive sources). • Plan the economic impulse and management in the communities so that it does not dependent solely on tourism and services for their development. The pandemic situation has demonstrated how fragile cities are and how dependet on tourism they really are.
Showing respect for the historical urban landscape in a positive way influences habitability.	Effectively implement UNESCO recommendations in the field of urban landscape, mainly in the field of visual pollution and street vendors.
Most cities said that their habitability is not threatened by any kind of insecurity.	Further deepen into the reasons that keep cities safe, for example, whether it is because there are job opportunities or because they are more guarded tourist sites.
The cities that reported modifications in the uses of public spaces, derived from the COVID-19 pandemic 19 cities noted the expansion of sidewalks, reduction of vehicles and authorizations to provide restaurant and cafeteria services in outdoor public spaces, aspects that can affect the mobility in historic centers.	Adapt public spaces for the benefit of cultural, social and sports activities in the open air, without affecting mobility.

Most of the participating cities obtained good averages, showing that they are habitable. Its main challenges lean on the updating of mobility plans, protection of the use of housing land and the sustainable development from tourism activity, in that way this activity does not dominate or becomes the only activity of the site, in this regard we stress the need to diversify and innovate within the sources of employment for the sustainable development of the world heritage cities.

MORELIA, MEXICO

INDEX

KUTNÁ HORA, CZECH REPUBLIC

SAN MIGUEL DE ALLENDE, MEXICO

INTRODUCTION

The World heritage cities enclose many historical contexts facing various challenges for the preservation of their legacy to future generations and for their ability to adapt to basic living standards of the different eras. One of the factors to consider is the permanence or rescue of the housing; which are posed as part of the actions for the conservation for the tangible and intangible heritage.

"If this function is undermined, the richness of the heterogeneity inherent to historic centers is diminished and their citizen status is restricted; that means it deteriorates irremediably […] the loss of housing entails the loss of society and the sense of belonging, […] if the residential function dissipates, the time and space of the historic center dissipates, if the home disappears, the set of urban and central functions disappears as well […] it is not the monuments which define the historical centers, it is the historically foreshadowed functions ". [1]

[1] Fernando C. "Historical Centers: Is it possible and necessary the residential space within its city`s heart?" In Alma Pineda and Mauricio Velasco (coord.) Historic cities and centers: the challenges of housing and habitability. Vol. 1, 2017, p.23.

SANTIAGO QUERÉTARO, MEXICO

Queries, objectives and results

In this approach, the General Secretariat of the OWHC in conjunction with the National Association of Mexican World Heritage Cities AC, proposed to work on this study, which main objective was focused on finding which are the general factors of habitability that cause the most positive and negative impact to the historic centers of world heritage cities, aiming also at finding good practices (to replicate them whenever possible) and bad practices (in order to avoid them) around the world. The cities that are part of the OWHC are represented by their mayors and municipal officials who make public decisions; so it is intended to provide elements that enrich the development of public policies on habitability.

The objective of evaluating the aspects that have an impact in the quality of life of historic centers was to clarify the realities of their habitability and provide new data to those who make decisions so that allow them to focus on objectives and specific public policies focused on promoting the habitability and conservation of these sites.

The information presented was obtained from the participation of 34 cities from 8 different regional secretariats of the OWHC. It is important to note that despite the fact that the COVID 19 pandemic took place during the preparation of the study, municipal officials make the time for answering the questionnaire that served to collect information for the analysis that was already carried out. This health contingency affected the participation of some cities in some regions; nonetheless, the goal was achieved, as it can be seen throughout this study.

The methodology of the study was based upon the design of a survey to collect general information on elements related to the habitability in the historical world heritage centers, including data on the conservation of the tangible and intangible heritage of the site.

WARSAW, POLAND


ZAMOSC, POLAND

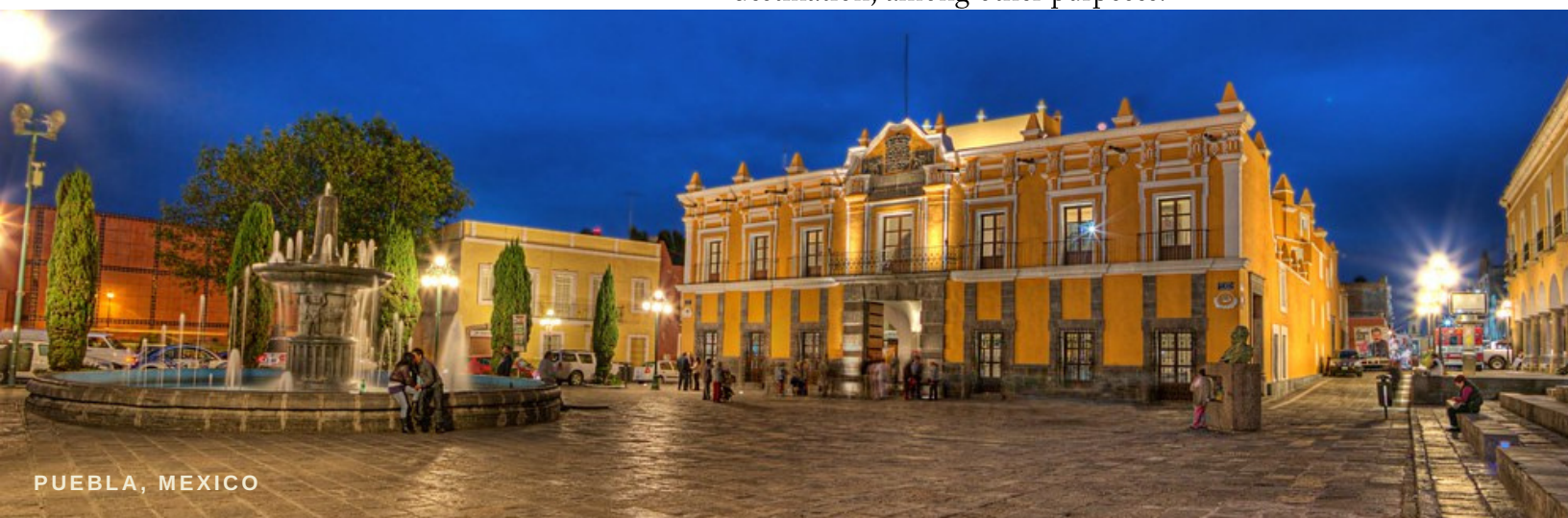

COLONIA DEL SACRAMENTO, URUGUAY

BACKGROUND

Habitability; A vision for the world heritage cities

The habitability is a concept that encompasses multiple components necessary to achieve a good quality of life; the 2010 Oxford dictionary defines the term as "fit to live in". According to different authors, the circumstances that determine the habitability of a place are the climate, the security, the economy, the society and its culture, the environment and the urban organization that implies equipment, infrastructure and available services. It is important to emphasize that; although the factors needed for a good quality of life vary according to the time and social customs, there are basic needs that are essential for all people.

Based on the previous paragraph, in this study different methods and indicators have been proposed to measure how habitable a city is; these methods are proposed according to the proposed objective of knowing the habitability of the site, that we can get to know by analyzing aspects such as urban planning, public policies, the attraction of real estate investment and the consolidation of a place as a tourist destination, among other purposes.


PUEBLA, MEXICO

DUBROVNIK, CROACIA.

For the world heritage cities, the concept of habitability becomes relevant for several reasons; on the one hand, it leads to the permanence of residents and the use of housing land, both factors considered necessary to preserve the cultural heritage. On the other hand, in terms of urban development and regeneration "habitability means the ability of a centre in order to maintain and improve its viability and vitality. These two terms give the ability of a historic center to consciously attract investment and stay alive"[1].

Historic centers are urban cores "inhabited for long periods of time, which achieve characteristics that can be defined as cultural heritage"[2]. Being the origin of the emergence of the cities which "are characterized by their diversity of uses, being tertiary or informal trade, housing, entertainment, tourism, civic activities, administrative and professional services, among others"[3], Some functions and equipment that in their emergence may have been necessary to have a good quality of life, and that perhaps if preserved intact, they would not be as habitable as they are today.

For this reason, the historical centres are facing cyclical adaptations due to the changes of epoch and ways of life, which represents a challenge to preserve their own identity, Since each period has involved adaptive modifications of urban scale as well as in the private spaces, examples may be the survival or reconstructions after an armed conflict, that is, until adaptations derived from the equipment in technological advances, as an example: the implementation of hydraulic systems, the opening of streets for the introduction of the car, or as we can be experiencing in this year 2020, the physical adaptations of buildings and public spaces so to face a health emergency

[1] Carlos, Balsas. "Measuring the livability of an urban centre: an exploratory study of key performance indicators." Planning, Practice & Research, 19(1), 2004, pp- 101-110.

[2] Eugenia María Azvedo Salomao and Francisco Javier Fuente Farias "Paisaje cultural y conservación del patrimonio: reflexiones en torno a ejemplos mexicanos" Relicário Revista Do Museu de Arte Sacra da Diocese dde Uberlandia, 2017.pp. 43-67

[3] Ibid. Balsas, C. J. (2004). Measuring the livability of an urban centre: an exploratory study of key performance indicators. Planning, Practice & Research, 19(1), 101-110.

Review of habitability studies

Different analysis methodologies and habitability indicators were analyzed; it was the case of the UN-HABITAT "Prosperity Initiative" which conceptualizes the prosperity of a city through six dimensions: 1. productivity; 2. infrastructure development; 3. quality of life; 4. equity and social inclusion; 5. environmental sustainability; 6. governance and legislation; as catalysts for local action towards prosperity, including the ability to regulate the urbanization process. The study is based on quantitative data, with the aim of making each situation comparable, applied to more than 400 cities worldwide, with urban measurements, with the purpose of generating intervention policies that are measurable over time. UN HABITAT works with urban indices and indicators, transforming them into strategic knowledge as a basis for the production of short- and long-term action plans. Clearly, its objective is to define actions based on its diagnosis and to measure that both policies affect the prosperity of the city, while strengthening the monitoring and reporting capacities of cities. We must not lose sight of the fact that UN Habitat as a United Nations agency is represented in the countries in which the cities that have been measured, which contributes to the collection of quantitative data and allows the proper monitoring of the behavior of the variables.

In addition to the previous points, UN HABITAT (United Nations Urban Settlements Programme), in the year 2020 has focused on goals that point towards sustainable cities, covering indicators related to 17 objectives that qualify as the strategies to be recognized as habitable cities, among which are: the absence of poverty, health and educational quality, gender equity, drinking water, accessible and clean energy, employment and economic growth, industrial and infrastructure innovation, responsibility in production and consumption, climate action, peace, justice and strong institutions and sustainable urbanization.

ÉVORA, PORTUGAL

AMLAPURA, INDONESIA

On the other hand, we also reviewed the "Global Liveability Index" of "The Economist Intelligence Unit"; this Global Habitability Index assesses which places in the world offer the best or worst living conditions. The habitability rating generated by the Intelligence Unit of "The Economist" quantifies the challenges that could arise as part of an individual's lifestyle in 140 cities around the world. Each city is rated by more than 30 qualitative and quantitative factors in five broad categories related to stability, health, culture, environment, education and infrastructure. The global coverage of "The Economist Intelligence Unit", along with thepresence of specialists worldwide and because of its comprehensive point of view, it makes it a unique index.

For C. Balsas, in his study "Measuring Habitability in Urban Centers" (2004), the concept of habitability in historic centers can be measured by KPI's[1] indicators that include demographic information of society and employment, commerce, parking, crime safety, cleanliness, tourism and nightlife. In a more recent study by Seryed Nima (2013) "Habitability in historic urban neighborhoods", In this case; the proposed methodology measures four dimensions: social, physical, functional and crime safety.

Accordingly, there are substantial methodologies with different indicators, such as that of the World Bank whose urban development goals for improving habitability by 2020 also focus on 4 points; 1) Improve the urban planning system and local public health capacity, employment programmes and slum upgrading; 2) Strengthen fiscal and financial systems, focused on promoting works that address the infrastructure challenges of each city, which in turn are climate resilient and low-carbon footprint; 3) Promote territorial and spatial development; 4) Build resilient and climate-smart cities; to sum up, their priorities in cities and economic growth, poverty and urban inclusion, municipal services and infrastructure, housing and affordable land, governance, finance and urban management, and urban environment.

Each research made in organism and habitability, above mentioned; aims to know and measure habitability from a particular angle; in this paper we are interested to know these data, specifically for the cities that are distinguished as world heritage. Identifying what are its main challenges in this area and what good practices are detected to be able to become a place to live with a good quality of life, or to get to know the failed practices so to avoid them by repeating them. This led us to the development and selection of the factors that affect the habitability and conservation of exceptional historic centers, with their own particularities that made them to earn the inscription in the list of the world heritage.

[1] KPIs: Key Performance Indicator.

DIMENSION	DYNAMICS COVERING
Social Dimension	Community organization, neighborhood and traditional life, sense of place and belonging, use and dynamics of space.
Physical Dimension	Types of land use, existence of subsidies or financing for housing, degree of conservation of public and private buildings, urban landscape and environmental quality
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Board 1. Dimensions of habitability. Source: Based on the methodological proposal of the Seyed Nima Libability in historic urban quarters case study: walled city of Famagusta.

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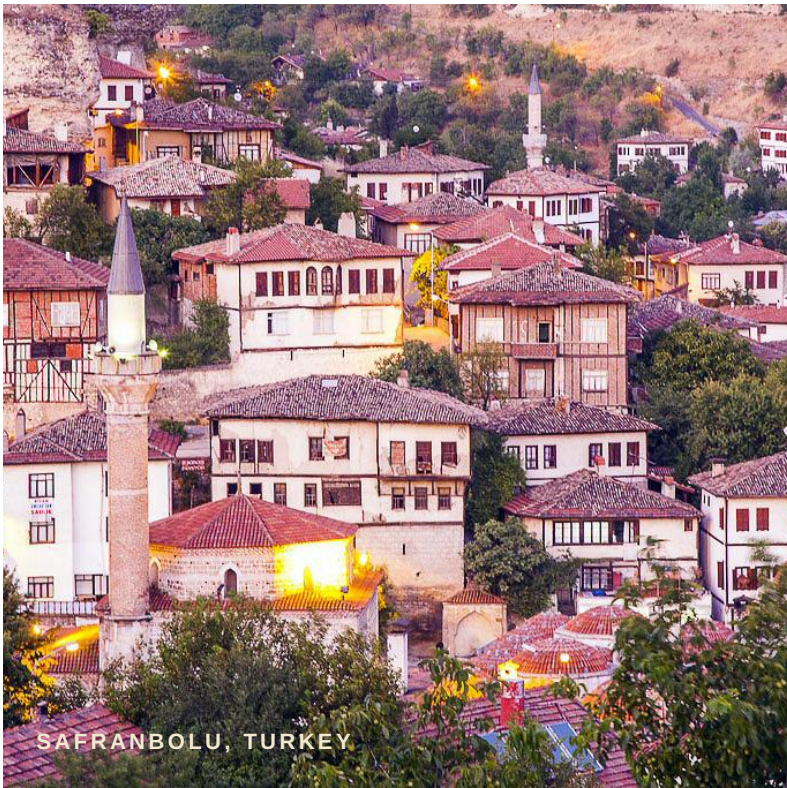
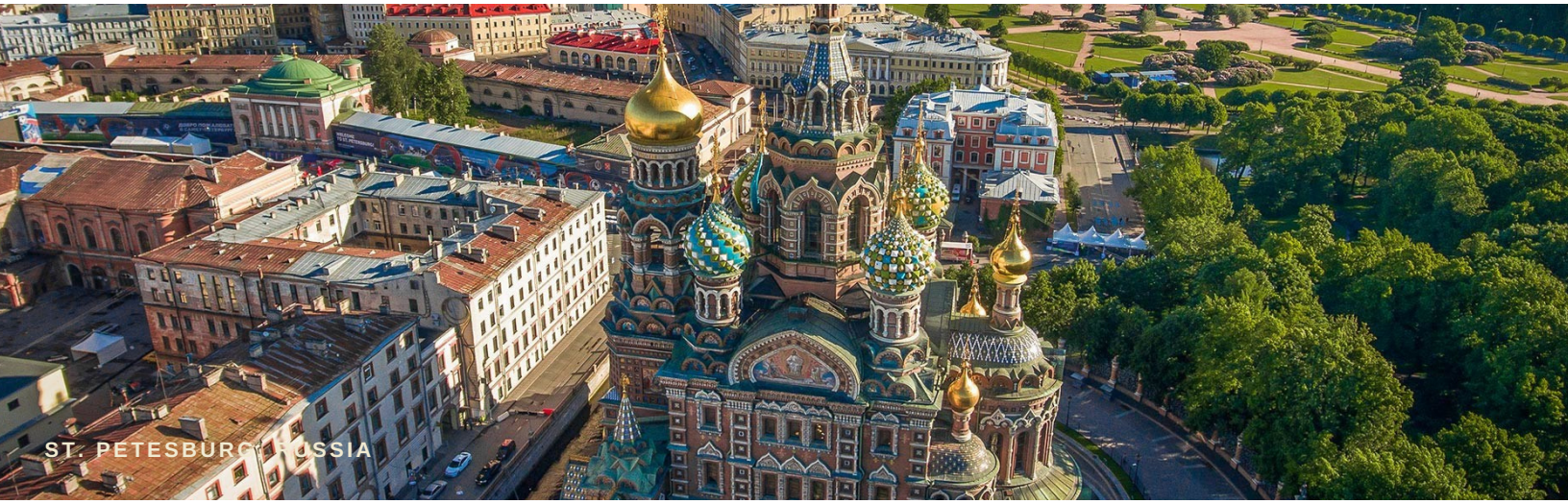


SAFRANBOLU, TURKEY



ST. PETESBURG, RUSSIA

III. METHODOLOGY AND SOCIAL, PHYSICAL, FUNCTIONAL AND SECURITY DIMENSIONS.

KOTOR, MONTENEGRO.

For the design of the questionnaire[1], the methodological proposal of analyzing the city was decided in four dimensions: social, physical, functional and security, and demographic and heritage conservation indicators were incorporated. The responses were weighted based on the parameters, purposes and quality of life goals of UN-HABITAT, Livability Global Index and the World Bank, as well as UNESCO's charters and recommendations for the World Heritage City approach.

The questionnaire consisted of 48 questions, as follows:

- 10 questions were answered in a binary way: "Yes" or "No", in which 6 of them were asked for description or more information about the answer, with the intention that the cities that would want to, could be able to share the good practices.

[1] Annex 1: includes the questionnaire, the answers obtained and the dynamic table

- 16 questions are answered with hard verifiable data.
- 22 closed questions are answered with Likert scale[1] items.

The answers received from the questionnaires, just like their general scores[2] were manually emptied into a dynamic table[3] whose function was to filter the information to compare indicators between cities and regions. For example; to choose the cities that are members of a certain regional secretariat, or to list only the cities that answered in a particular way or those that obtained a certain score in a certain dimension, this is done with the intention of identifying trends at the global or regional level.

A micro-website (owhc-mx.com) was developed in order to apply the questionnaire, which included a summary of the study's approach, a conceptual framework, a guide to the information needed to answer the questions, and also the recommendation of the profiles of the municipal officials who were able to answer it, all with a friendly design to facilitate the capture of the answers.

[1] The Likert Scale is a 5- or 7-point scale that offers a range of answer options - from one extreme attitude to another, like "extremely likely" to "not at all likely." This methodology was considered the most suitable to answer the questionnaire responses, which do not represent hard data, rather measuring the perception provided by different representatives of the cities with different experiences in the subject. The intention is that the symmetric ranges be able to capture the intensity of agreement or disagreement of each question. In this type of questions, objectivity is expected from the municipal officials who will provide answers.

[2] Most of the questions were given a point value (from 0 to 4) according to their greater or lesser impact on habitability, with 4 points corresponding to the answer considered to have the greatest positive impact on habitability, in accordance with the methodology developed for these purposes, thus obtaining overall scores for the study's objective of identifying trends and good practices.

[3] Dynamic table: It is a tool that consists of a grouped database that allows combining, buying and analyzing large volumes of data.

Social Dimension

A characteristic aspect of historical cities is their heterogeneous population, mainly because in their original spatial distribution, they had habitable zones for all social and economic classes. The organization and quality of life was defined by territorial status, those settlements determined the lifestyle, customs and function for which they were created: neighborhoods, settlements or native peoples, etc. These factors are related to the sense of place and belonging, the rootedness of daily life towards the site, which can cause stagnation in the evolution and development of the place, or it may promote the preservation of the cultural identity of the site.

The other reasons why the population group of the historic centres is heterogeneous and varied is derived from all the periods they have gone through, in which the neighborhoods could have specialized in ultural, educational, religious sectors, tourism, government, etc. Societies live and are integrated by appropriation of the place by different groups, customs, interests and ways of thinking. Each site is transformed and inherits a quality of life, so the new generations also continue to generate changes. With the passing of time, some activities are restructured, new neighbors arrive, new ideas come, the way of life changes, the uses change, the space changes, the distribution changes, even the roots of those who inhabit it at every moment.

Physical Dimension

The parameters of the physical dimension are related to the quality of their spaces, both in their individuality and historical urban complex (encompassing public, private buildings, green spaces and communication routes). Correspondingly, the housing and population density of the place is evaluated, as well as the abandonment of houses or of undeveloped land. The quality of the environment, health conditions, and different sources of pollution, road congestion, noise and visual pollution are also observed.

UNESCO proposes the historic urban landscape through an inclusive approach, relying mainly on the historic city and in the background on the landscape and its components; therefore we incorporate these elements into the physical dimension in the methodology we have decided to apply.

SAN PABLO VILLA DE MITLA, MEXICO


TEL AVIV, ISRAEL

Functional Dimension

This dimension aims to measure the characteristics that the site provides for the development of the daily activities of its inhabitants and the quality with which they can exercise them, namely their functionality. In this dimension, multiple parameters must be evaluated, ranging from basic aspects for daily life, like the equipment and infrastructure of drinking water, energy and public lighting, as also provide access to education, health, religion, employment, culture, food, recreation, mobility and sport. In addition to this, the quality of life in the functional aspect depends also on meeting factors related to the practices and customs of the present time, in this case; access to computer technology and accessibility in all its aspects.

Through the questions that were included in this dimension, we seek to obtain information to analyze how accessible the historic center can be with the services it currently provides to the population, and how beneficial the urban infrastructure is for the indispensable and daily functions to live.

Security Dimension

The sense of belonging goes hand in hand with that of feeling in a safe place. This factor has different implications in multiple realities of the context, from the political, economic and cultural situation. From a social point of view, when an inhabitant knows the area, the people, the neighbors, the external agents and even the dynamics of tourism, it can be said that there really is a sense of security.

Some aspects that affect this safe environment are the poor quality of public services and infrastructure, such as street lighting or poor connectivity provoking security problems, or when the population is made up of social groups without any roots, when there is a high rate of depopulation with abandoned buildings or an environment of excessive tourism. The small number of inhabitants in the historic centre, the lack of conservation of the monuments and the air of abandonment are factors that definitely affect the perception of security.

This is why promoting quality of life and heritage conservation is by itself an action to achieve better safety index. By reducing property deterioration, habitability is promoted. To promote the rehabilitation of housing in historic centres is to offer the forgotten places a new opportunity with better quality; to enable public space is to promote outdoor activities that result in minimizing the crime rate in forgotten free spaces or areas. These actions add to the regeneration of the urban fabric, generating a dignified and attractive environment to live.

Hence the questions of this dimension are limited to how much is the habitability in the historic center affected by some kind of insecurity?

IV. APPLICATION OF THE QUESTIONNAIRE AND INTERPRETATION OF RESULTS.

Study Universe

Table 1. Study universe. Source: surveys received in the period June to September 2020.
Table 1. Study universe. Source: surveys received through the owhc-mx.com digital platform

The sample consisted of thirty-four cities inscribed on the world heritage list, which are part of the OWHC, and the distribution is presented in Table 1.

Depopulation in historic centres; demographic section,

Questions 8 to 13 of the survey,

While heritage cities are the cultural product of a society and its history, they continue to grow and modernize; therefore they get involved with new events that are also part of that history. It has been a common feature that these cities keep a record of depopulation throughout their history, the reasons

ANGRA DO HEROÍSMO, PORTUGAL

No.	REGION	COUNTRIES	CITIES
1	Africa and the Middle East	Israel	1 City: Tel Aviv
2	Central America, The Caribbean and Mexico	Mexico	8 cities: Campeche, Morelia, Puebla, Querétaro, San Pablo Villa Mitla, Zacatecas, Mexico City, San Miguel de Allende.
3	South America	Peru, Uruguay	2 cities: Cusco and Sacramento
4	Euro Asia	Turkey	1 Ciudad: Safranbolu
5	Central and Eastern Europe	Poland, Azerbaijan, Russia, Czech Republic and Latvia.	10 cities: Budapest, Cracow, Icherisheher, Kazan, Kutna, Riga, Zamość, Torun, Warsaw y St. Petesburg.
6	North West Europe and North America	Austria, Lithuania ans Belgium	3 cities: Brussels, Vienna, Vilnus.
7	Southern Europe and the Mediterranean	Portugal, Spain, France, Croacia and Montenegro	6 cities: Angra do Heroísmo, Évora, Baeza, Lyon, Kotor, Dubrovnik.
8	Asia Pacific	China, Indonesia and Laos PDR	3 cities: Suzhou, Amlapura, Luang Prabang

Table 1. Study universe. Source: surveys received in the period June to September 2020, received through the owhc-mx.com digital platform

ranging from mobilization to new sectors of the city for the expansion of cities, by replacing the use of land for housing by functions derived from trade, food and tourism, or by issues such as gentrification[1] or property speculation and the high cost of maintaining and updating historic buildings.

In addition to the above, based on the phenomena derived from globalization, cities face challenges and opportunities in the face of cultural diversity, as well as the need to implement measures for the accessibility and inclusion of all living conditions, whether by health, religious beliefs, regional origins, economic conditions, etc.

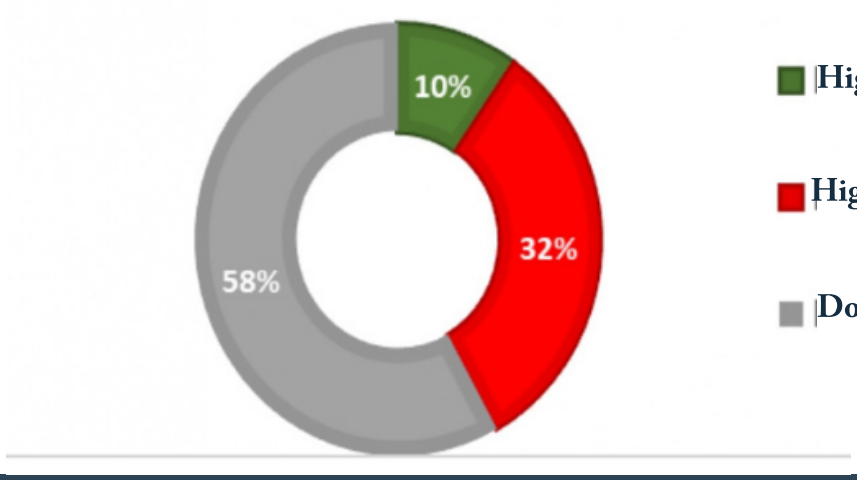
A fact that allows us to observe the habitability of a site as a world heritage site, is related to know if it has more inhabitants or less inhabitants than when it was included in the list of UNESCO. In the same vein, measuring immigration and emigration is a clear indicator of whether a place is fit to live. The results of these reagents in the questionnaire showed a lack of information and a lack of knowledge of these statistics. Particularly in the area of migration, although most of the participants did not provide data, it was possible to identify that almost half of the cities that provided data reported emigration (figure 2).

DEPOPULATION IN THE HISTORIC CENTRE

Graph 1. Percentage of cities that increased or decreased their inhabitants in the historic center since the year of their inclusion in the UNESCO World Heritage list. Of the 34 participating cities.

[1] Gentrification: "Process of urban transformation in which the existing real estate is revalued and the resident population in an urban area is replaced by population of higher social class." Lorenzo López Trigal, Dictionary of applied geography.

IMMIGRATION AND EMIGRATION RATES



Graph 2. Percentages of immigration and emigration of the 24 participating cities.

Sense of place and Social Dimension

questions 14 to 19 of the survey.

It is significant to talk about the identity of the site since the analysis is made observing the phenomenon from the perspective of a cultural heritage city, with exceptional traditions and universal values. Therefore, it is important to know if it retains or promotes its sense of place[1].

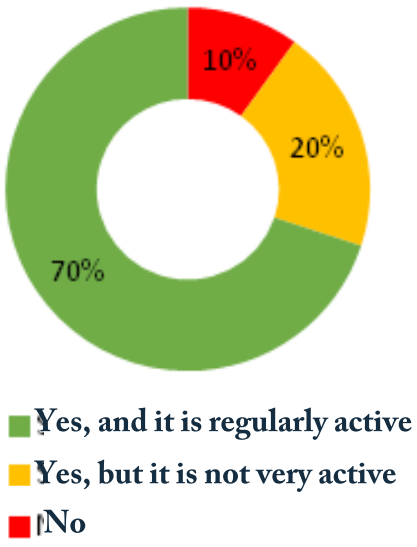
Traditions and customs

The permanence of an original community of the place that still practice its uses and customs, are an indicator of the habitability and conservation of intangible heritage, which can be valued when measuring its organization, either by the existence of a oard, a board of residents, or because they still celebrate and practice their traditional festivals.

[1] Sense of place: "the characteristics that make it unique" Francisco Javier Fuentes Farías "Landscapes and cultural itineraries in Michoacán conservation and development".

Other indicators that the site maintains a good quality of life for the society that produces the heritage culture in question, is the preservation of languages or endemic dialects, or the use of traditional dressing, cooking, singing and dancing, As well as the craftsmanship of the site and the preservation of local construction techniques.

The results regarding the community and the spaces for cultural and sports recreation were quite positive; 30 cities reported having an organized community and from these, 25 said that this community is regularly active. With regard to the availability of spaces for sports recreation, 25% of cities declare that they do not have access to them, and 6.4% declare that they do not have spaces for any culture activity. The results of this study show that 70% of cities have an organized and regularly active community (graph 3).

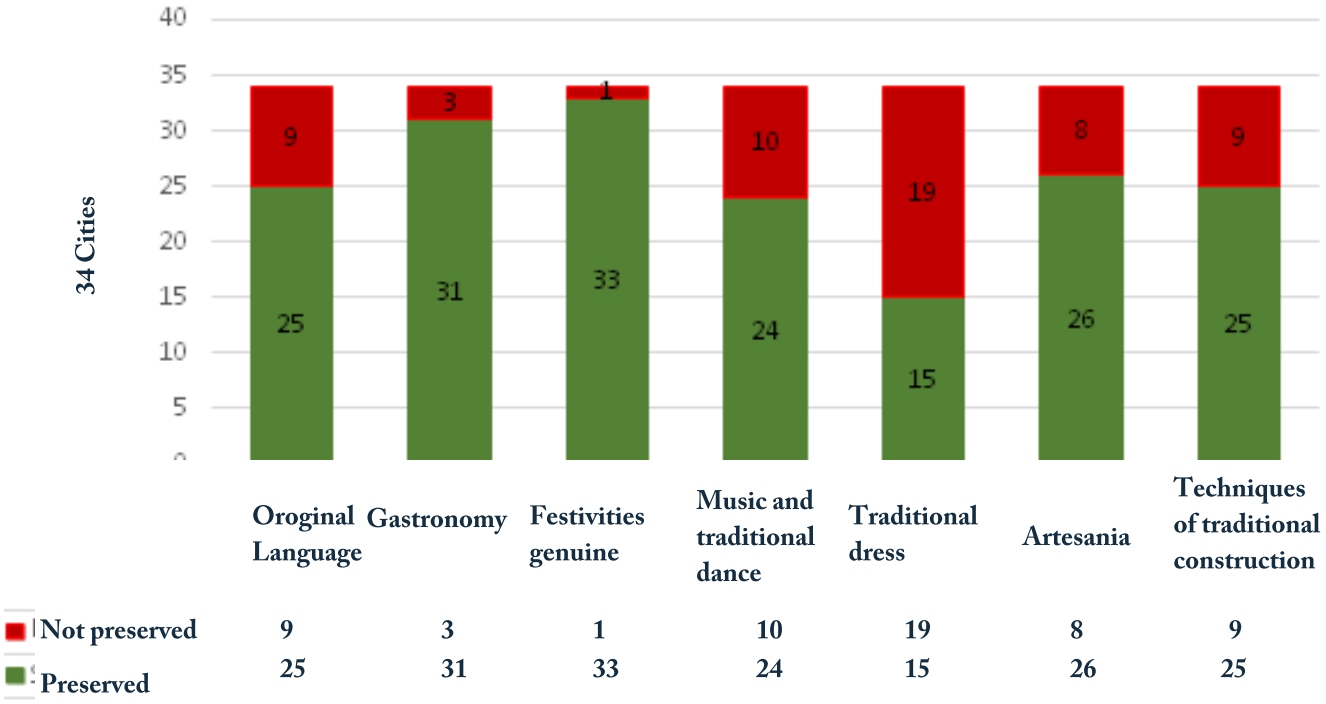


Graph 3. Responses to question 14, on community participation and organization.


SOUZHOU, CHINA

This study, based on the Convention for the Safeguarding of the Intangible Cultural Heritage, recognizes the thesis that there is a deep interdependence between the intangible cultural heritage and the material heritage; The intangible heritage provides communities with a sense of identity that favours both creativity and the management of the environment, so the study's question on the conservation of intangible heritage is relevant (traditional clothing, handicrafts, traditional construction techniques handed down from generation to generation). Different indicators of conservation of intangible heritage indicate that it is preserved, especially in its gastronomy, crafts and original languages (Graph 4).

CONSERVATION OF INTANGIBLE HERITAGE



Graph 4. Status of intangible heritage items.

Tourism in World Heritage Cities

The tourist attraction goes hand in hand with the production and conservation of this world-renowned cultural heritage. Tourism, while giving recognition to the values of the site, means an important economic activity as a source of direct and indirect jobs for the inhabitants, it may endanger the quality of life if it is exceeded in its tourist carrying capacity[1]

Although tourism means an economic engine for these cities, and this can be a reason for their revitalization, when the economy depends on the excess of this activity, can be compromised both in the sustainability of this activity and in the stability of local development" [2]

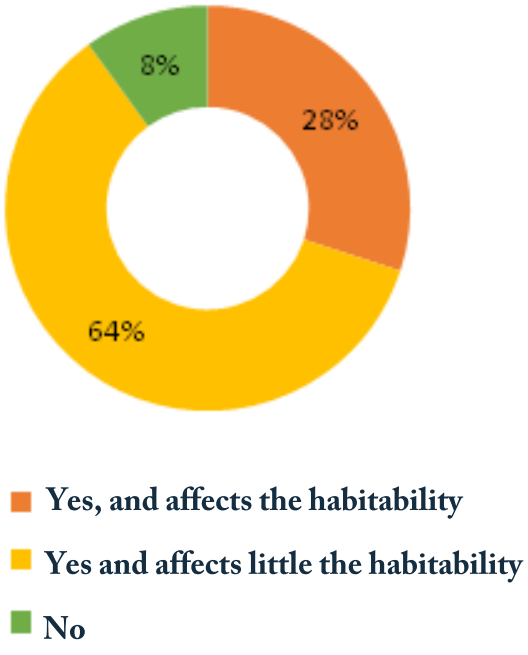
[1] Tourist load capacity: "Destinations have a limit in their tourist capacity, it must be established based on mobility, infrastructure, equipment, environment, accessibility and economy. [...] The carrying or hosting capacity of a destination is difficult to establish in a quantitative way, so it should be thought qualitatively [...] There are three concepts of tourist carrying capacity that a historic-monumental city must consider in a combined way; physical, social and economic capacity."

[2] Miguel Ángel Troitiño. "Turismo, patrimonio y recuperación urbana en ciudades y conjuntos históricos" Madrid, Patrimonio Cultural de España, vol.6, 2012, pp147-161

In addition, the nightlife activity that tourism can generate is a decisive factor in the expulsion of local inhabitants if it has been mixed in a disorderly manner in residential neighborhoods, by lowering the quality of life by bringing noise and insecurity caused by issues such as drugs and prostitution that can be attracted by an intense nightlife.

The crucial factors that subtracted score from the results of this dimension were that 50% of the cities said that tourism displaces the housing function and that in 64% of the cities the nightlife mixes with housing affecting the habitability.

Although tourism is a source of employment and cultural diffusion, and encourages the preservation of monuments, it has detected that it tends to dominate the activities and occupation of buildings, displacing the housing function, and even though the tourist can be considered a temporary inhabitant, the permanence of the inhabitants of the local culture is essential for the conservation of the intangible heritage.



Graph 5. Cities whose nightlife affects habitability

Table of inter-relations of community organization (social dimension)

Question 14: Community organization Out of 34 cities, 9 do not have an organized or active community, from which:					
DIMENSIIN	SOCIAL	SOCIAL	PHYSICAL	PHYSICAL	SECURITY
Questions	*Question 15.* Nightlife affects habitability	*Question 18.* Tourism displaces housing	*Question 23.* Homelessness between 10 and 20 per cent	*Question 28.* Tourist housing affects habitability	*Question 47.* Insecure habitability
Cities	In 8 Cities	In 6 Cities	In 5 Cities	In 7 Cities	In 1 City

Table 2. Contrast of question 14 with answers to questions 15, 18, 23, 28 and 47.

AVERAGE CITIES ACCORDING TO POPULATION DISTRIBUTION (MAXIMUM SCORE 244 POINTS)	
The average of cities with all social strata	204.66
The average of cities with middle and low class distribution	189.11
The average of cities with middle and upper class distribution	186.3
The average of cities with low class concentration	173.75
The average of cities whose main occupation instead of housing is tourist and commercial.	153.91

Board 2. Average habitability of cities according to the distribution and occupation of social strata in the historic center.

From the table above, it is inferred that cities with a dispersed or inactive community correspond more to those with a greater presence of tourist activities, of leisure and accommodation, this may result in part of the inhabitants not being permanent - because the buildings function more as accommodation centres than permanent dwellings- this phenomenon must be monitored to balance the distribution of land use, and avoid loss and/or abandonment of housing function. On the other hand, the lack of community cohesion is not reflected in the impact on habitability due to insecurity, according to the results of this study, since only one city considers that insecurity has affected the habitability.

Finally, as part of the social dimension, getting to know the main economic sector that inhabits the patrimonial perimeter allows us to identify the phenomena of segregation or fragmentation in the city, such as gentrification or depopulation. A historic center as a foundational nucleus contained all kinds of uses, functions and social strata; knowing if it continues to be diverse or if it has been hegemonized is significant to be able to identify if the quality of life for any social sector has decreased.

BAEZA, SPAIN


KAZAN, RUSSIA

It is worth mentioning that the maximum score of the survey is 244 points, the highest score obtained was 242.67 and the lowest of 135.66. The average rating obtained among the 34 participating cities was 186.82 points.

In Table 2. it can be seen that cities in which housing supply includes all social classes, or the middle and lower classes, are above the average result (186.82), while those in which the middle and upper classes are concentrated (that is probably the result of gentrification), or just the lower class are below the average result, and finally, in which the housing function is totally displaced by commerce and tourism, results in a score far from the general average.

The answers to question 21 on the most concentrated social stratum, indicate that the upper and upper middle classes are concentrated in these historic centres, confirming the classical theories of gentrification in the sense that it entails the expulsion of ancient neighbors by virtue of a process whereby certain areas of a city, after having experienced a deterioration of the buildings and an economic devaluation, they experience a reverse process and progressively gain interest both for new individuals, and for the tourism sector, and consequently also for real estate investments.

With all the above, we confirm the hypothesis that the diversity of social strata in the historical centers, as it occurred in its origin, strengthen the habitability.

Public space and Private space: Physical Dimension

In the historical sites the physical conservation of their built heritage is managed in two different ways; one for the estate and public space to which they may serve directly according to the decisions of each administration in turn and the other way is indirectly for privately owned built heritage, this happens through regulations, laws and public policies, according to the country; however in any case it must be taken into account that, being a patrimonial set, private properties are subject to the duality of individual property, and the cultural value and even the requirements of conservation as a world heritage:

The preservation of the built heritage of private property is part of the dichotomy of the public and the private, including goods that, immersed in the real estate market, are at the same time considered a public good, which, together with its significance as an element of identity and social cohesion and as a generator of economic benefits, has justified the intervention of the State, which is not always successful, for its conservation and exploitation. [1]

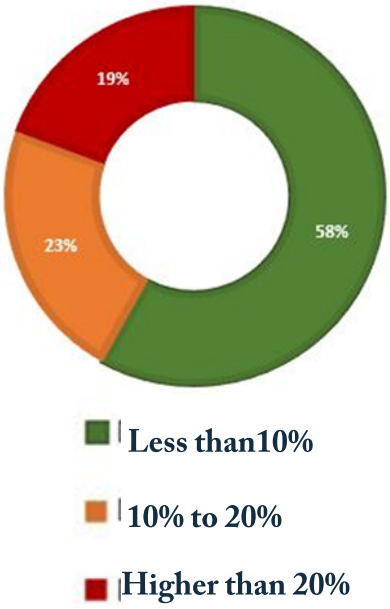
1] Eugenio, Mercado López. "Patrimony built on private property: complex and contradictory relationship between the public and the private in the historic center of Morelia", Mexico City, Intervention, 2011, p. 27.

Housing;

Questions 20 to 23

The abandonment of housing is one of the indicators when a city is not habitable. The results of the questionnaire show that at least half of the cities have a low percentage of this phenomenon of abandonment. 77% of these cities have regulations to protect the use of housing land and they implement them efficiently.

In the study universe, no consistent indicator or any marked trend was detected that may characterized cities with housing abandonment greater than 20%, Therefore, the following are the features that possibly originate this phenomenon of abandonment in each of the 6 cities that reported it:



Graph 6. Percentage of abandonment of housing in the participating cities

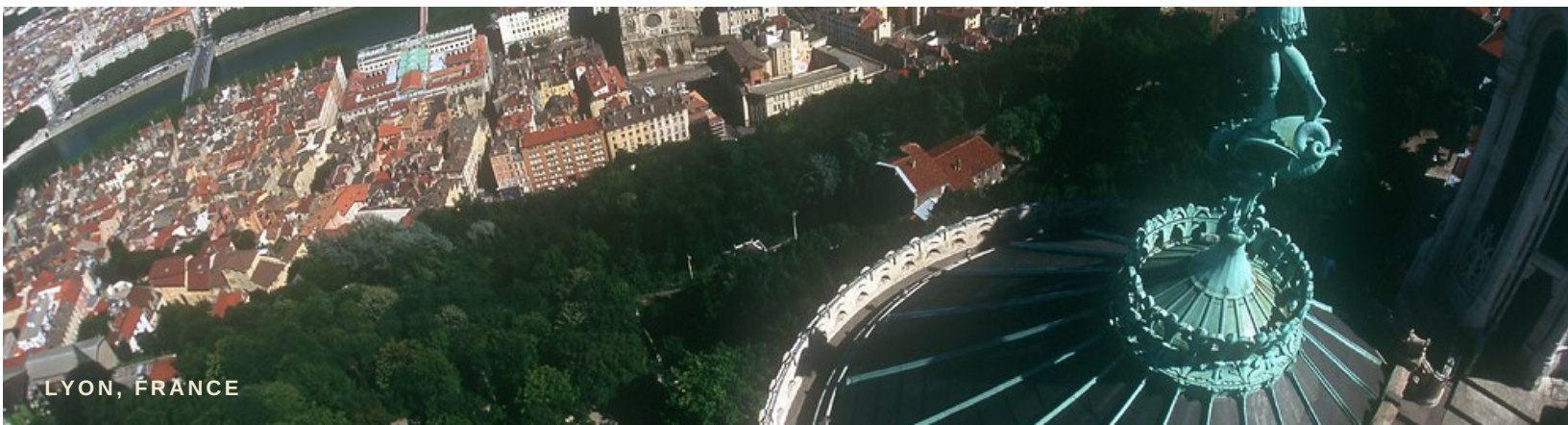
INDICATOR	ANSWER
Question 18 on whether tourism has displaced housing	5 cities answered that tourism has partially displaced housing and 1 replied that tourism has completely displaced housing.
Question 20 on supply for all social strata	3 cities do not have housing for all strata: in one city housing has been displaced by tourism, in another by industry and in the third mostly young.
Infrastructure and equipment	2 cities state that the equipment is inadequate.
Question 26 on residential land use protection regulations	4 cities have and apply, 1 has and does not apply and 1 does not.
Question 28 on whether tourist housing affects habitability	In 3 cities tourist housing affects habitability
Question 47 on whether insecurity affected habitability.	2 of the 6 cities stated that their habitability is affected by minor crimes.

Table 3. Analysis of the 6 cities with more than 20% of abandonment with other indicators.

The reduction in the number of people living in the historic centres triggers a vicious circle, since the abandonment resulting from the loss of the population translates into an increase in deterioration and a consequent decrease in the value of property, which in turn facilitates the installation of other activities and because of their nature they generate negative externalities affecting the environment and consequently the quality of residential life, as the hours pass by, the centres are almost empty, generating a feeling of insecurity in passers-by. Therefore, the characteristics presented by each of the 6 cities that reported abandonment of housing more than 20% are described below, with the intention of identifying trends that could be related to this phenomenon.

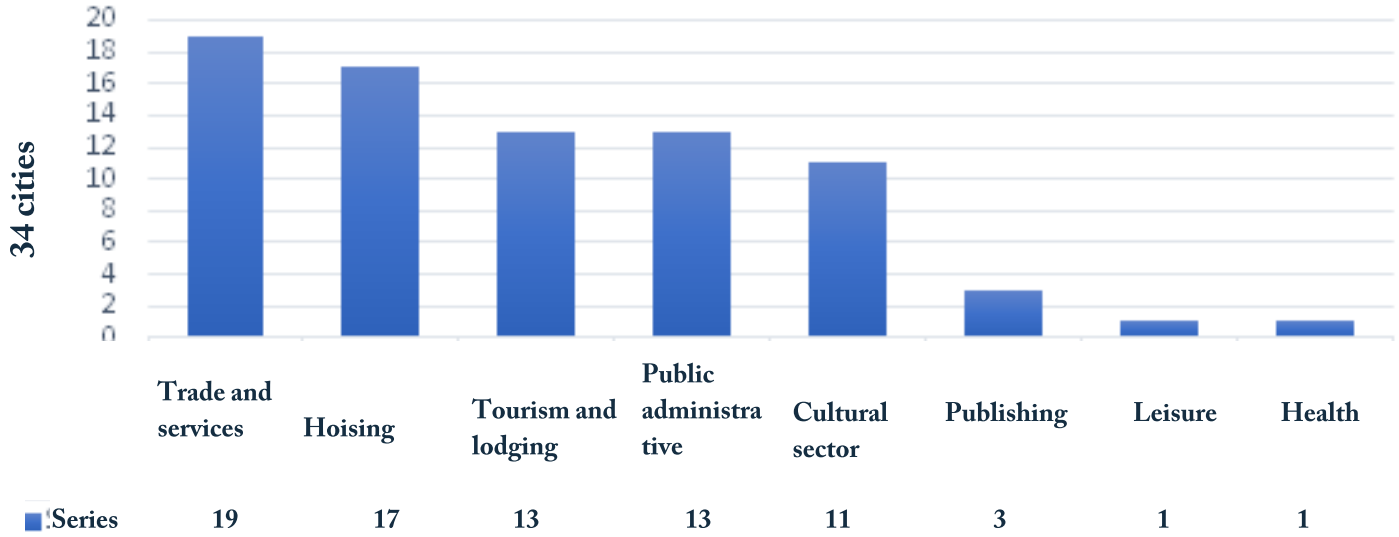
1. City one: its infrastructure quality is more or less adequate, it has housing or all social strata and the predominant is the low economic strata.
2. City two: tourism has partially displaced housing and it mentioned that the main source of employment is tourism.
3. City three: there is no housing for all social strata, their habitability is affected by insecurity of minor crimes. It has a high unemployment rate. Tourist housing affects habitability and there are not enough parks and public squares. It has visual contamination and in the conservation score of its intangible heritage it obtained a lower than average score (12 out of 28).
4. City four: It does not have enough sports spaces, there is no access to housing credit in the historic center and the land use protection regulations do not apply.
5. City five: there is no housing for all social strata and the buildings are used for tourism and commerce, in question number 18 they answered that tourism displaced the housing completely and they also replied that they do not have regulations protecting the use of residential land.
6. City six: It is affected by insecurity of minor crimes, there is no housing supply for all social strata and is used for manufacturing industry, the quality of infrastructure is inadequate and the telecommunications service is inefficient, the Land Use Regulation does not apply. Tourist housing affects habitability.

The most important common denominator in cities with more than 20% of abandoned housing is that tourism and tourist housing have affected habitability, is the only trend that can be identified in the detailed analysis of the 6 cities that fall into this assumption, and both aspects can be ordered through an adequate regulation of land uses. The other elements may be isolated factors, but they are worth showing to be also taken into account.



LYON, FRANCE

Most repeated answer to question 27.2: Mention the 3 dominant land uses in your historical centre



Graph 7. Dominant land uses

Land Use;

questions 26 to 28.

To obtain the dominant land use in the historic centres, each city was asked to mention the 3 most concentrated land uses in its territory, resulting in 1) Trade and services being the most repeated[1] ; 2) There is function of housing; 3) The functions of tourism, including accommodation services. As it can be seen in the following graph, the second most repeated land use was housing. Taking into account the habitability objectives of the World Bank and UN-Hábitat mentioned in the conceptual framework of this study, this graph shows us the deficiency in education and health equipment in historic centers, compared to the supply of trade, service and tourism functions.

Promoting the conservation of the use of housing land is not a complete policy, unless balance is also taken into account in the other functions and services necessary for daily life, that is, if there is sufficient educational, health and supply equipment, of sports and religious activities, as well as of public spaces for the coexistence and recreation of the community; if the place is saturated only with administrative, civic or tourist functions, it will not be an environment with a good quality of life for the inhabitants. Therefore in the questionnaire it was requested to mention in the different land uses if they are perceived as non-existent, sufficient or excessive. In the study we identified that the most dominant uses in the historic centers are: commerce and services, housing, administrative functions, in this order; this leads us to argue that it is still time to establish policies to maintain housing uses (still present in an important way in the historical centers), likewise it can be observed that the commercial activity gives life to the majority of the historical

[1] Land use "trade and services" includes restaurants and souvenir shops.


VIENA, AUSTRIA

centers of the world heritage cities, still preserving one of its original vocations. What is striking, as already mentioned, is that both educational and health uses are very scarce, as well as those with sport activity uses. Some uses that are non-existent are those for high-impact industry (The basic petrochemical, chemical and metallurgical, chemical, automotive, electrical industry), and the medium-impact industry is present in very few cases; by the growth of cities, industrial uses have been displaced from historic centres.

Administrative use is the third most dominant in the cities participating in this study; it would be interesting to know whether this type of use, by generating employment and government activity, is directly linked to habitability, This is if the employees of the administrative offices of government, tend to live in the very historic center where the source of their employment is located.

Public roads and green areas;
question 30.

The relevance of environmental issues to human health and urban contexts is an indicator of quality of life for today's society, and this can be measured through the availability of public spaces with green areas, considering at the same time, accessibility and inclusion for all type of users.

Conservation of privately owned built heritage;
questions 31, 32 and 34.

As we have already mentioned, when talking about heritage conservation in any historic center, we must consider private properties.

The concept of built heritage is a concept that is born and sustained in the public, so it is up to this area to establish conditions conducive for private property to maintain that multiple validity that guarantees its conservation. [1]

Getting to know the physical state of private property is an indicator of the valuation given by the population to inhabit the site, that is, if the quality of life is good and they want to continue inhabiting the place. The investment that may be required by old buildings, both for maintenance and restoration and the implementation of new adaptive uses is important, so the good condition of these is evidence that it is a habitable sector.

There are a number of factors that may influence the degree of conservation of a heritage site in its privately owned properties, starting with the quality of the basic infrastructure of a dwelling, and continuing with policies like access to credit and financing for the acquisition and rehabilitation of old buildings, as well as

[1] Ibidem, p. 29.

the clarity and accessibility in the building and land use regulations of the city and the bodies that protect the built heritage in each country. In the event of any weakness in any of these factors there is likely to be a significant percentage of abandonment or loss of habitability. It is important to remember that from the answers to questions 20 and 21 the cities that reported habitability with a population of only one social stratum obtained a lower score, that is to say, with few possibilities to finance the adaptations or rehabilitation required, especially in the absence of subsidies, tax incentives or financing for it.

It is important to consider that through the fiscal policy the public sector can generate incentives for private initiative to invest in real estate. Tax incentives reduce the tax burden on the private sector and generate tax savings that allow for higher returns that can compensate the investment risk. In line with the above, tax incentives are exceptions to the general tax regime, which aim to reduce the tax burden on individuals and seek to change their behaviour by inducing them to invest in certain sectors or regions, in the present case, in the historic centres. If the obstacle to participating in a project to revitalize historic centres is related to the lower expected returns compared to what can be obtained in other locations outside the world heritage perimeter, then the role of public sector fiscal policy is to close the gap between returns.

Built Heritage;

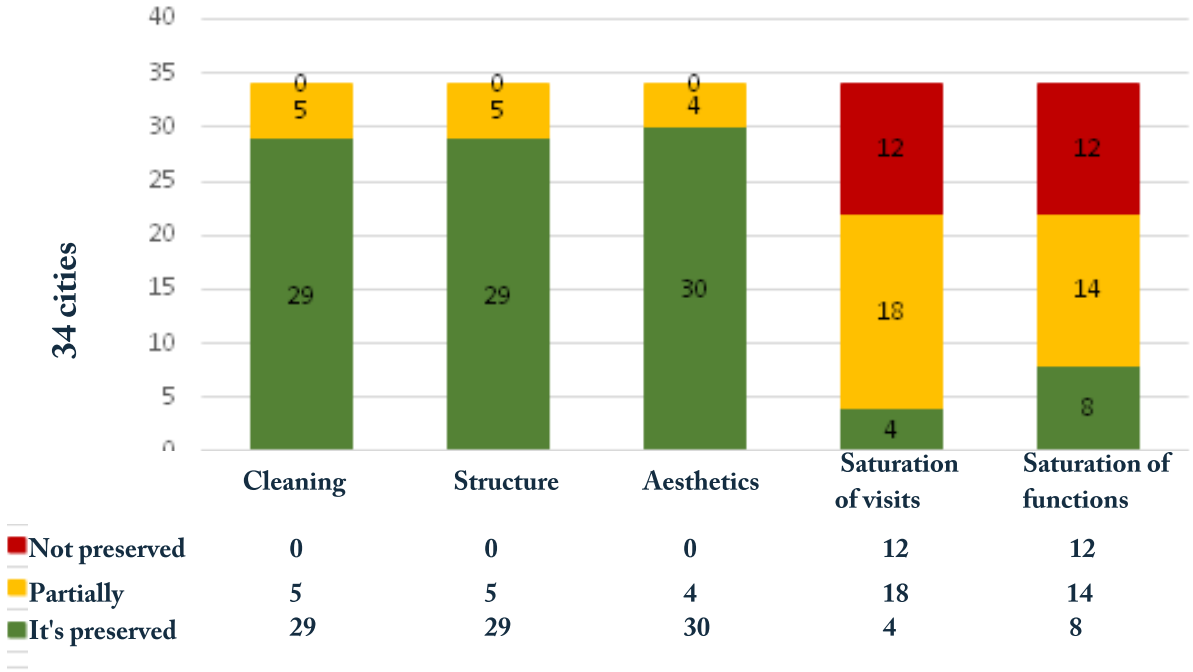
question 31

The conservation of the monumental heritage, on the one hand, is a policy of cultural identity, in addition to being a trigger for attracting investors and tourist activity. It has been related that, if the monumental heritage is preserved, the context is also preserved.

The results in general of the participating cities indicate conservation in aesthetic and image factors, while the factors related to their operation and operation reflect dynamics that keep them in their load capacity limit, both functions and uses of visitors.

RIGA, LATVIA

CONSERVATION MONUMENTAL HERITAGE



	Cleaning	Structure	Aesthetics	Saturation of visits	Saturation of functions
Not preserved	0	0	0	12	12
Partially	5	5	4	18	14
It's preserved	29	29	30	4	8

Graph 8. Indicators of the conservation status of monumental heritage.

Historic Urban Landscape

According to UNESCO's recommendation on historical urban landscape, this concept is known as "the urban area resulting from a historical stratification of cultural and natural values and attributes, which transcends the notion of "set" or "historic centre" to cover the general urban context and its geographical environment"[1]. Measuring these attributes as part of the indicators of habitability distinguishes this research, what these data can reflect to us is that if the city is habitable specifically as an urban complex, or if it is also by considering the conservation of its world heritage.

Problems and perspectives raised by the Recommendation on the Historic Urban Landscape of


BRUSSELS, BÉLGIUM

[1] Recommendation on the Historic Urban Landscape, Proceedings of the General Conference. 36° Paris meeting, 25 October-10 November 2011

Paris 2011, revolve around the increase of the population in the cities and its consequences, as these become driving centres of economic development, changing the relevance of cultural life and caring for the environment, putting pressure on its quality of life by: 1) uncontrolled urbanization that erodes the character of the site; 2) economic development processes without sustainable planning, that is through the exploitation of human, natural and cultural resources. In this context, if the implementation of tourism services technologies and functions "correctly apply the notion of historical urban landscape to their management, can provide a significant economic boost and thus contribute to the well-being of communities and the preservation of historic urban complexes and their cultural heritage without undermining their socio-economic diversity and residential function." [1]

To be able to measure this indicator, on the one hand, it was proposed to survey the degree of conservation of the elements of identity and tradition of culture; language, festivities, gastronomy, crafts, music, dances, clothing, and traditional constructive techniques; and, on the other hand, the elements that are a physical consequence of the lack of planning in the sustainable development on the whole, such as;

1) visual pollution (by elements that demerit the cultural and natural attributes);
2) hearing pollution (this factor should not be underestimated as an element affecting habitability);
3) informal trade, because it is a constant dynamic in historical groups that show problems in the generation of employment, in the urban planning and in the control of the activity of tourism services, among others.

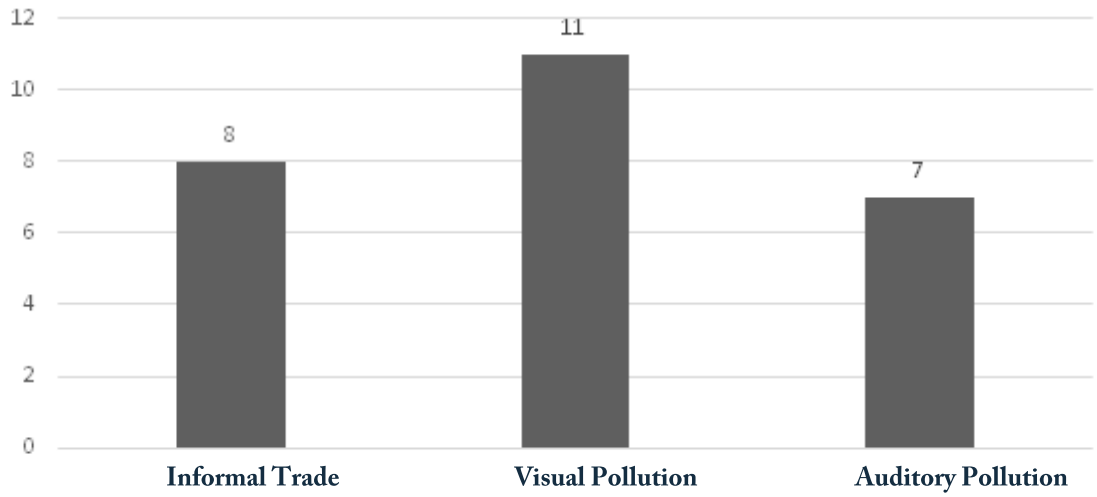
The transport sector plays an important role, since the reduction of traffic emissions, noise and vibration so to improve the quality of life of residents also have positive impacts on heritage areas. Pollution damages traditional surfaces and the vibration of traffic undermines the old structural elements, while traffic noise decreases the sense of history and silent contemplation offered by many heritage sites.

Overall; the results keep reflecting the trend of the factors that were analyzed, where 70% of the cities maintain a positive rank, and the challenges are distributed in 19% of the cities, leaving only a smaller percentage of cities with more marked problems in various forms of pollution, mainly visual and that generated by informal commerce.

[1] Recommendation on the Historic Urban Landscape, Proceedings of the General Conference. 36° Paris meeting, 25 October-10 November 2011
[2] Ibidem. P.22

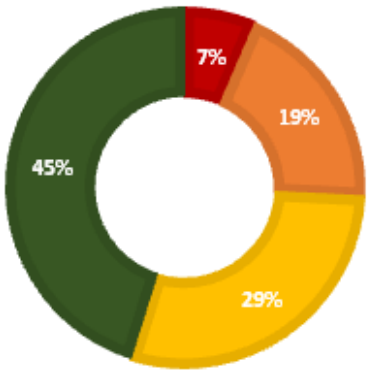
TORUN, POLAND

INCIDENCE OF POLLUTION FACTORS OF HISTORICAL URBAN LANDSCAPE



Graph 10. Incidences of pollution factors of historical urban landscape.

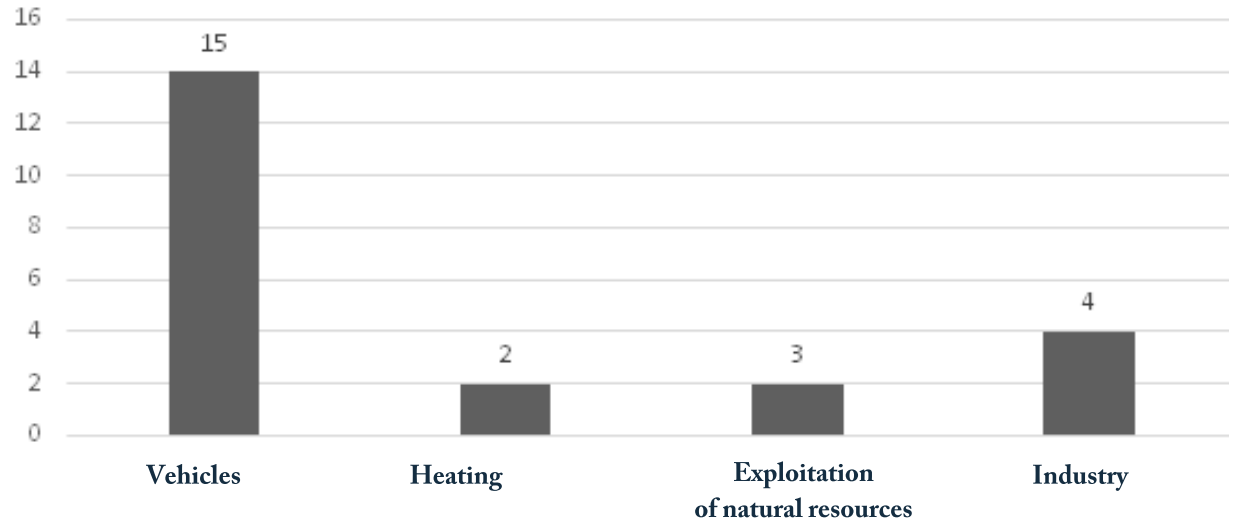
POLLUTION OF HISTORIC URBAN LANDSCAPE



- Cities with 3 forms of pollution of historic urban landscape
- Cities with 2 forms of pollution of historic urban landscape
- Cities with 1 form of pollution of historic urban landscape
- Cities without any form of pollution pollution of historical urban landscape

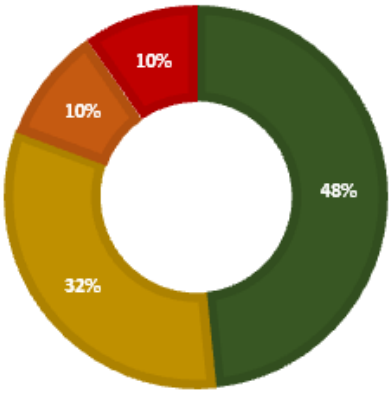
Graph 9. Percentage of cities with forms of pollution of the historic urban landscape.

INCIDENCE OF ENVIRONMENTAL POLLUTION FACTORS



Graph 12. Incidence of environmental pollution factors.

ENVIRONMENTAL POLLUTION



- **Cities without environmental pollution**
- **With one source of environmental pollution**
- **With two sources of environmental pollution**
- **With three sources of environmental pollution**

Graph 11. Environmental quality.

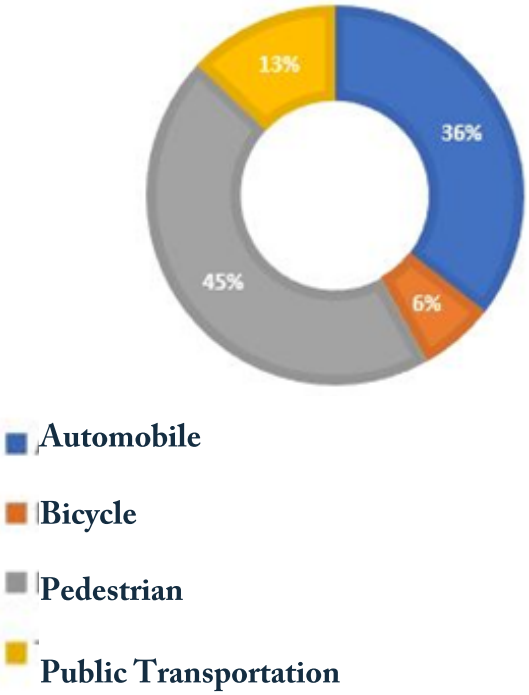
Environmental Quality;

Questions 35,37 and 38.

Getting to know if the environment and climate are suitable or can adapt to human life, without representing an impact, is part of the conservation measurements of historical urban landscape and an indisputable indicator to measure the quality of life of any site. Given the breadth of this subject, and in order to obtain the current state of the cities in terms of the quality of development of life in the city environment, we asked about the existence of sources of pollution, and also if there is exploitation of natural resources and the air quality index.

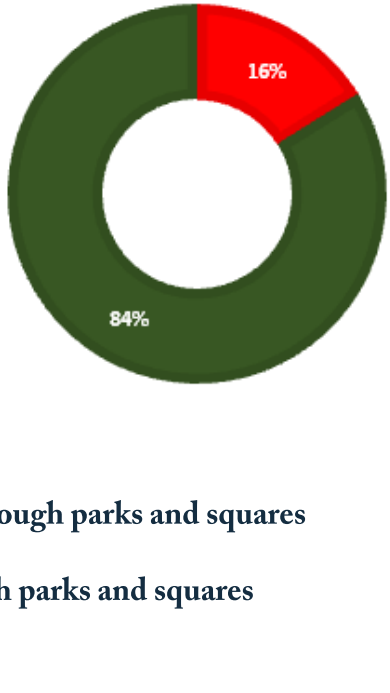
In the previous graph we highlight that although in question 43 (Is it indispensable to use an automotive transport to move?), 25 cities replied that the vehicle is not indispensable to travel and that only in 11 answers is the most common means of transport, in 15 cities this represents the main source of pollution.

MEANS OF TRANSPORT MORE COMMON



Graph 13. Most common means of transport.

PARKS AND GREEN AREAS



Graph 14. Availability of public spaces and green areas.

Public space and green areas

Regarding the use of public space, 84% of the participating cities replied that they have enough parks and areas for coexistence.

Infrastructure and equipment: Functional dimension,

Questions 39 to 46

Sources of employment are an indicator taken into account in all studies on habitability; it should be taken into account that if sources of employment depend solely on an economic activity, such as tourism, stability is fragile, so the diversity of job offers is weighted in the study with higher score. In addition, in the absence of diverse sources of employment, this will lead to the migration of citizens with different job aspirations than they possible get in their own city.

In this regard, we recall the Paris 2011 Urban Landscape Recommendations, which state that, as part of the sustainable development strategies in the social and economic field, for socio-economic diversity, the planning of the economic impulse and the management in the communities so that you are not dependent only on tourism and services for their development, if these are diminished and there is no alternative productivity plan to them, there will be no source of sustenance for the population, as we experienced in the periods of confinement that we live globally in 2020.

MAIN SOURCE OF GENERAL EMPLOYMENT: TRADE AND SERVICES

	REGION AND NUMER OF PARTICIPANT CITIES	MAIN SOURCES OF EMPLOYMENT	AVERAGE UNEMPLOYMENT RATE BY REGION.
Main sources of employment in each region	Africa and Middle East	1) Financial services, 2) Hi-tech professional services	21
	Central America, The caribbean and Mexico	1) Commerce and services; 2) Administrative; 3) Tourism	3.46
	South America	1) Administrative; 2) Tourism; 3) Commerce and services.	4.8
	Euro Asia	1) Tourism; 2) Culture; 3) Industry.	10
	Central and eastern Europe	1) Commerce and services; 2) Industry; 3) Tourism.	3.49
	Northwest Europe and North America	1) Commerce and services; 2) Industry; 3) Culture and tourism	11.62
	Southern Europe and Mediterranean	1) Administrative; 2) Trade and services / education; 3) Tourism	5.6
	Asia Pacific	1) Tourism; 2) Administrative	1.4

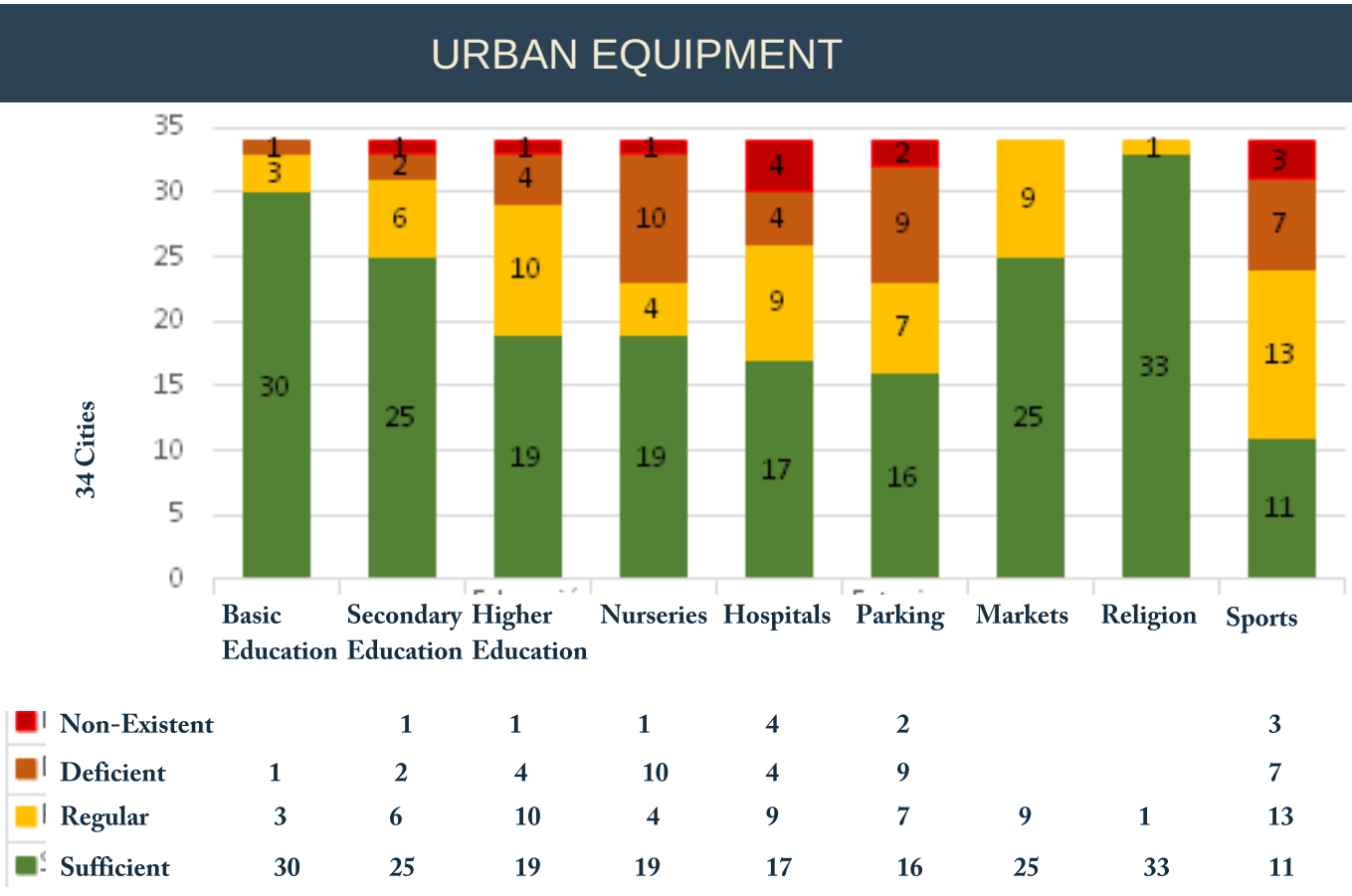
Table 3. Sources of employment by secretariatSource: data from the survey application responses of this study. In interpreting this table take into account the number of participating cities per secretariat.

Equipment Facilities

Urban equipment enables the organization and life projects in the short, medium and long term. For example, the educational levels available and the quality of the pamphlets determine the permanence of citizens, as well as migration through job offers, the migration of students to other cities in order to acquire their professional education may take place, phenomenon that may cause many of those original inhabitants of a site to no longer return. Similarly, access to health care, the availability of supply centres, sports and cultural centres, etc., have a strong impact.

The following graph shows the equipment statistics of the participating cities. We can observe deficiency in parking lots, nurseries, higher education, sports sites and hospitals.

For the full development of life and the projection of the permanence of the inhabitants it is important to consider the expectations and opportunities of the resident in their city, the lack of educational offer is the main source of migration for the local youth, and once they left, few return to hometown. The lack of nurseries or children's rooms is an amenity presented as a deficiency in several cities, which can be a disincentive to habitability for young couples with children.



Graph 15. Quality of Urban Equipment.

Infrastructure

Another fundamental element for the habitability of the historic centers, are the indispensable services and their quality, such as drinking water, urban lighting, electrical energy (if they use renewable energies), and specifically whether the quality of telecommunications has been satisfactorily matched to current needs, both for private use and in public spaces. With regard to the latter, the vast majority of cities surveyed indicate in their responses to question 25 that telecommunications services are efficient. The tourist vocation of these cities and modernity in several of them has generated efficient telecommunications services. No city reported a deficiency in such services, and only a minority reported having more or less efficient services.

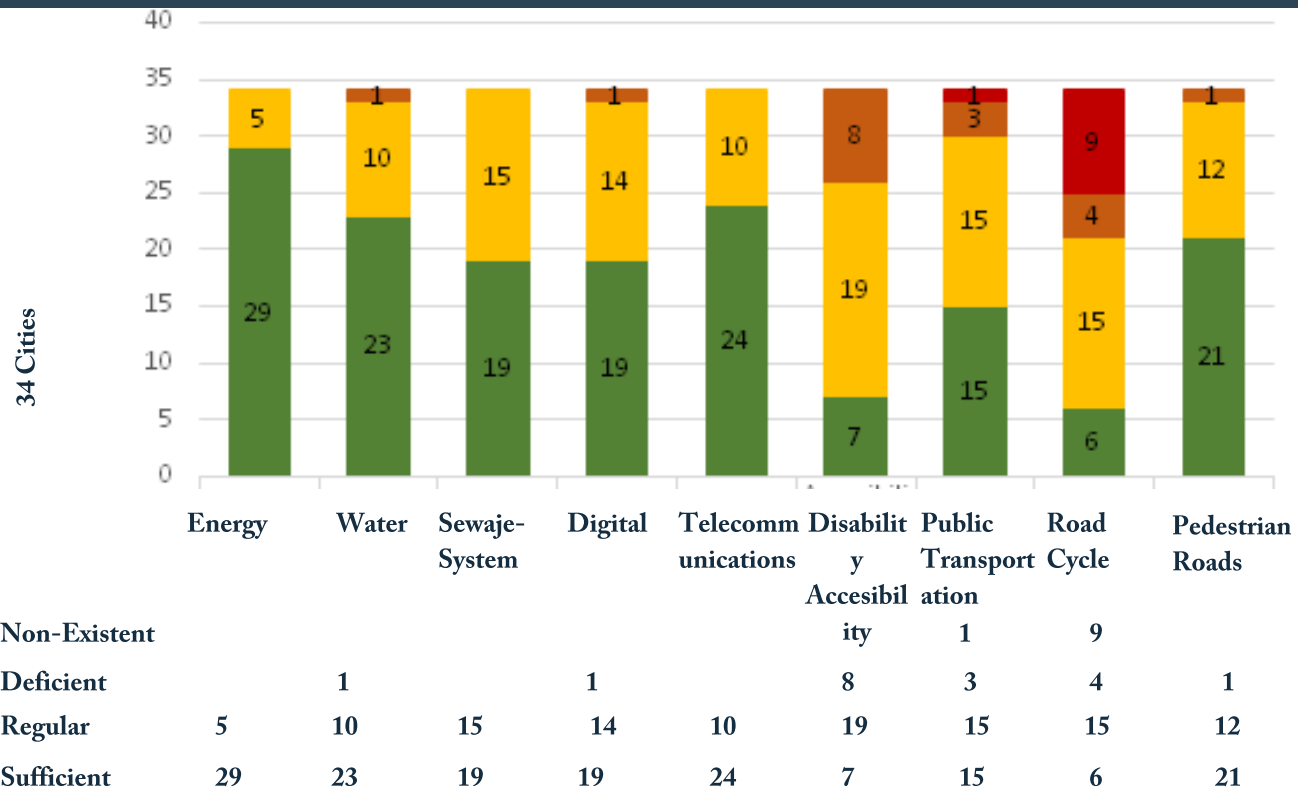
In addition to the above-mentioned services, the quality of mobility services is also important; if distances are short journeys, that facilitate travelling without motor vehicles, it is important to know whether public roads like parks, Alleyways, walkers and sidewalks are a safe and pleasant means to transit, because even if the distances are by walking distance, if the means are unsuitable, people will not choose to travel on foot or by bicycle and will use car or means of mass transport. It is important to mention that historic cities were not planned with the dimensions that may support a high number of vehicles, and this can be a serious conflict for the quality of life of the place. On the other hand, if the mobility of the site is given more through a means of mass transport, we must acknowledge if its service is efficient or deficient.

In this dimension the quality of basic infrastructure was valued, resulting "adequate" in 77.41% of the cities, "roughly adequate" in 12.9% of the cities and only 9.6% said that it was "inadequate", of the latter percentage, the cities correspond to the Southern Europe and Mediterranean region and to Central America, the Caribbean and Mexico. On the other hand, the telecommunications service was valued as adequate in 93.54% of the cities.

The elements of basic infrastructure that were most deficient are 1) accessibility for persons with disabilities; 2) public transport service and routes for non-motorized travel; and 3) The digital and telecommunications service along with the sewage service.

MEXICO CITY, MEXICO

URBAN INFRASTRUCTURE



Graph 16. Quality of urban infrastructure

Strategies and coexistence from the COVID-19 pandemic in 2020

The current global event with the COVID-19 pandemic is an emerging phenomenon that, while we are still figuring out how to deal with it, it has already shown us that the different cities must implement protocols for the so-called "new coexistence".

This is a clear example of the fact that World Heritage Cities should not invest their entire economy in tourism, since; if it is diminished, the whole city will face a severe crisis.

Different strategies and protocols are currently being proposed for the reopening of public spaces, given the continued possibility of further closures if the rate of contagion from the pandemic goes unchecked. The World Travel and Tourism Council (WTTC), which represents the private travel and tourism sector worldwide, was supported by the World Tourism Organization (UNWTO) to issue a "Safe Travel" stamp to tourist destinations that implement cleaning protocols that follow the standards and patterns set by the World Health Organization and the Center for Disease Control and Prevention, this to help rebuild the consumer confidence.

Thus, the survey adds the section of question 46 to know if heritage cities are designing and

implementing strategies for the new coexistence, and asks that, in the event that these strategies are being implemented, and they should describe them, because this condition is currently the most important factor in the quality of life of the world's population.

Fourteen cities shared their practices and strategies for the habitability of cities from the COVID-19 pandemic. It is important to mention that the design of this research was carried out in anticipation of this contingency, and the evolution of the same took place in parallel with the development of the study, so extracting another type of data at this stage was not feasible, since we are still facing this health emergency. However, we consider it opportune to collect data on what has begun to be implemented until September 2020.

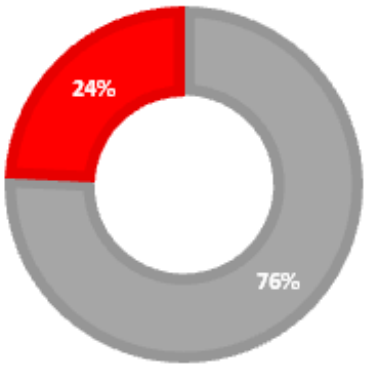
It is highlighted that many responses are focused on the indications of the WHO, referring to quarantine isolation, social distance, closing of social centers, wearing face masks, limited number of people in public spaces and sanitation protocols such as disinfection and temperature intake at public entrances. However, some cities presented some physical measures and elements for healthy coexistence.

No.	CITY	ANSWER
1	**Icherisheher**	**Quarantine regime: restriction of access to cafes, restaurants, historical monuments. After quarantine, the accesses will be monitored with hygiene measures and social distance.**
2	**St. Petesburg**	**Social isolation, wearing a face mask in public spaces and social distance. Closed public spaces during quarantine.**
3	**Kazan**	**Social Distance**
4	**Oaxaca**	**Health protocols in hotels, restaurants and tourism service businesses. Limit in the number of people allowed in public spaces, mandatory use of a face mask and healthy mandatory distance.**
5	**Suzhou**	**Taking temperature in public spaces.**
6	**Budapest**	**Maps to show little-used public spaces. Leave the streets for pedestrians and cyclists on the weekends. Flexible schedules for work and school.**

No.	CITY	ANSWER
7	Alampura	Restriction of hours in markets and in people's activities.
8	Vilnus	Move cultural events and restaurants to open spaces.
9	Brussels	Extension of terraces in cafes and restaurants.
10	Lyon	"Urban tactics" (He did not describe which tactics)
11	Morelia	Flexible streets and public spaces (Did not describe what is flexible)
12	Tel-Aviv	Clear streets to bring restaurant furniture and the use of public buildings for education into open spaces.
13	Puebla	Restriction polygon for cars and thus reduce the flow of people and sanitary protocols.
14	Cusco	Adaptation plan that includes mobility, commerce, protection of heritage and decentralization of public services.
15	Dubrovnik	• Suspend rental rates and illegal use of apartments from April to June 2020. • 50% reduction in business income. • Reduction to 70% of the amount of public area rent. • Exception of payment of parking for citizens. • Exception of the payment of advertising taxes in the city.

Board 3. Policies to address the health crisis by COVID-19 (2)

SAFETY DIMENSION IN PARTICIPATING CITIES



- **Cities without impaired habitability due to insecurity.**
- **Cities with impaired habitability due to insecurity.**

Graph 17. Percentage of cities affected by insecurity

Security Dimension

Finally, the security situation is a decisive factor, which may involve the immediate loss of inhabitants, even if the other dimensions are satisfactory. If an armed conflict, a criminal group or any life-threatening situation occurs at a site, this will imply that the site is not a place suitable for good quality of life. In this dimension, it is important to cross-reference information to identify if there are relationships or constants of unsafe cities and other deficiencies and vice versa, which characteristics coincide between safe or unsafe cities.

The survey responses project that only 8 of the 34 participating cities are affected in their habitability by insecurity, of which 7 are for incidence of minor crimes, 1 of them mentions the incidence of major crimes and the remaining city mentions incidents of civil confrontations It was necessary to consider security as a dimension and it was not included it in the social dimension or as demographic data because this data alone can be derived from factors outside or external to the indicators being measured in this survey, that is, security is not necessarily linked to some other dimension; and it is an indispensable indicator that by itself can determine if a site is habitable, regardless of whether the other three dimensions have an excellent score.

To verify this, several related reagents were analyzed to detect if there is any coincidence between the cities that expressed impairment of habitability due to insecurity that could determine some representative factor that could be considered as a generator of minor crimes without finding any specific one, however, we find the following coincidences:

KUTNA, CZECH REPUBLIC

	QUESTION	RELACIÓN
47. The habitability is affected by insecurity	Question 17. Availability of sports spaces	4 have no availability of sports spaces.
	Question 18. Tourism has displaced the function of housing.	In 6 tourism displaces housing
	Question 20. housing for all social strata.	In 4 there is no housing offer for all social strata
	Question 21. More concentrated social stratum	It is varied and different in all cities.
	Question 28. Tourist housing	In 5 tourists housing affects habitability.
	Question 35. Historic urban landscape	All have visual, auditory contamination or informal commerce.
	Question 39. Unemployment rate	The average unemployment rate for these cities is 8.31
	Question 44. Most common means of transport	Only in one the main means of transport is the car.

Board 4. Analysis of cities with insecurity.

Without being conclusive, it is worth to mention that in most of the cities that reported that habitability is affected by insecurity coincides with the diagnosis of those cities that have more than 20% of abandoned housing, Tourism has displaced housing and tourist housing has affected habitability, with a new heading appearing in this section, referring to the absence of sports spaces for the community.


CRACOW, POLAND


CUSCO, PERU

FINDINGS

General Avergaes

According to the design of the questionnaire, with grades from 0 to 4, corresponding to those answers that are considered as having the greatest positive impact for habitability, the maximum score to be reached is 244 points. It is important to note that the weighting corresponds to the authors' elaboration of the study, for the purpose of identifying trends; the study is not intended to award qualifications by city, but the sharing of good practices by those cities that obtained the highest scores.

Accordingly, the highest score obtained in the study was 242.67 and the lowest was 135.66. The average rating obtained among the 34 cities was 186.82 points, that is to say 76.56% of points overall. In this sense, four grading intervals were established, two groups with results that are above the average and two groups with the result lower than the average (Table 4).

CITIES	MEAN
Cities with average between 244-216 (Excellent)	4
Cities with average between 215-187 (Good)	12
Cities with average between 186-159 (Regular)	15
Cities with average 158-130 (Low)	3

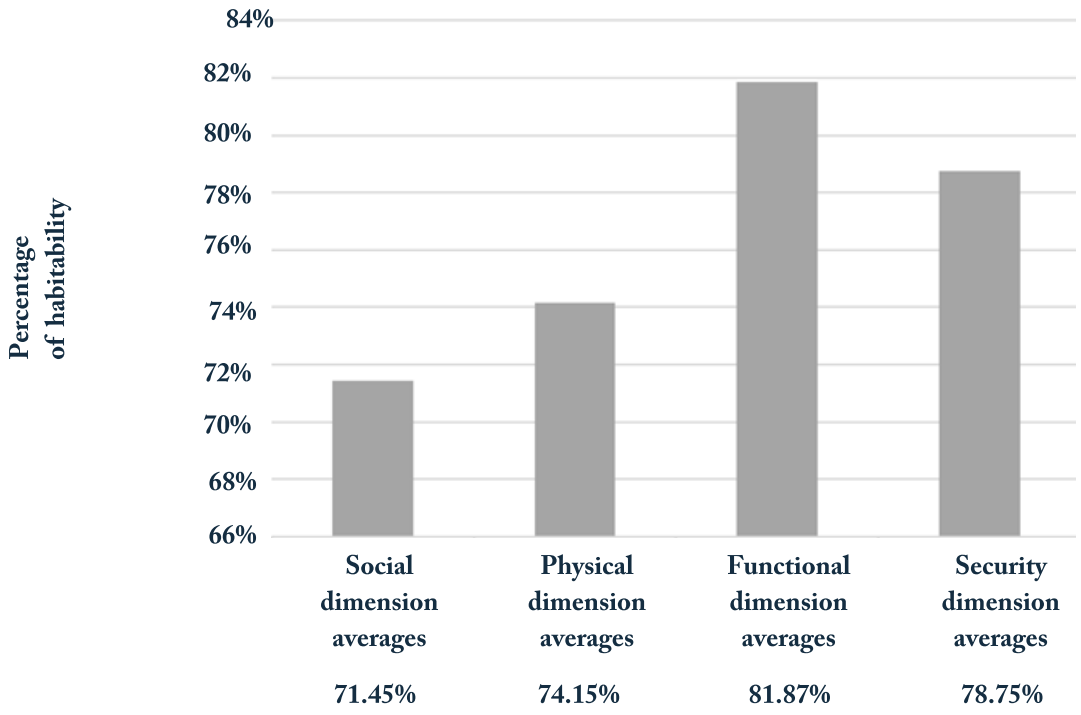
Table 4. Distribution of results by averages.

Dimensions and factors with the highest and lowest average

In the interpretation of habitability results by dimension, we find that contrary to the idea that a historical context is lagging behind in infrastructure and urban equipment, the survey shows that in the participating world heritage cities, these habitability factors are adequate and sufficient, including services related to current telecommunications and digital network technology. In addition, a trend identified in the study is that these cities do not have major problems of insecurity or pollution, in addition they properly preserve their physical space, both in public areas, and in private properties.

The results in general terms are positive since from the questionnaire it appears that most of the cities obtained a good average of habitability, and the visible failures lie on the one hand in the social inclusion (due to the lack of accessibility both in the physical space to people with disabilities and access to housing for all economic strata), and on the other in the saturation of the commercial function, services and tourism, leaving aside innovation from other productive sectors that diversify sources of employment, which has displaced essential services such as education and health.

AVERAGES OF HABITABILITY BY DIMENSION



Graph 19. Results of habitability by dimension.

FACTORS OF EACH DIMENSION OF HABITABILITY, WITH THE HIGHEST AVERAGE

DIMENSION	FINDINGS
Social	• Cities have organized and active communities. • The intangible heritage is preserved especially in its festivities, gastronomy and crafts.
Physical	• In 84% of cities there have enough public, sports, cultural and green spaces. • In 45% of cities, their main means of transport is pedestrian (by walking) and in 13% public transportation. • 48% of cities do not have a significant source of pollution. • The conservation status of monuments, private and intangible heritage in general is preserved. • The conservation status of monuments, private and intangible heritage in general is preserved. • The second most repeated land use in the survey is housing and 58% of cities have less than 10% of home abandonment.
Functional	• Urban equipment, basic services and infrastructure are sufficient and adequate in most cities. • The quality of the digital service is sufficient and adequate in most cities.
Security	76.47% of the participating cities mentioned that their habitability is not affected by insecurity.

Board 5. Factors of each dimension of habitability, with the highest average

FACTORS WITH THE GREATEST NEGATIVE IMPACT ON THE HABITABILITY OF EACH DIMENSION

DIMENSION	FINDINGS
Social	• In 13 cities, nightlife displaces housing • Tourism displaces housing from the historic center in 23 cities and tourist housing affects the habitability of the historic center in 18 cities.
Physical	• In 20% of the participating cities there is more than 20% abandonment of housing in the historic center. • Monument and historic buildings have an excess of visitors and an excess of functions. • The highest factor of pollution of the historic urban landscape is visual. • The most repeated factor of environmental pollution is due to vehicular traffic (in 15 cities), followed by 5 cities that reported pollution by industry, 2 by heating and 3 by exploitation of natural resources.
Functional	• Poor accessibility for people with disabilities. • Few cities have road equipment for non-motorized means of transport, such as cycle paths, and in 80% of cities the car is not essential to get around. • Equipment: little supply of higher education, nurseries, hospitals, parking lots and sports centers. • The source of employment is centralized especially in commerce and services.
Security	The 8 cities that answered that their habitability is affected by insecurity also mentioned that it was for minor crimes, and one of the cities also mention for civil confrontations and another one added for major crimes.

Board 6. Factors with the greatest negative impact on the habitability of each dimension

Coincidences and relations at the global and regional level, in the cities with the best average and in those with the lowest average.

OBJECTIVE	COINCIDENCES
To Find the characteristics of the cities in the highest rating range of 244 - 216 points.	• Your community is organized and regularly active • Nightlife has little effect on habitability. • Tourism does not displace housing. • They have housing for all social strata. • There is access to loans and financing to purchase a home, as well as subsidies and incentives to preserve historic buildings. • Your land use regulations are effectively enforced. • Dominant land uses: 1) residential; 2) administrative; 3) cultural and commerce. • Tourist housing does not affect habitability or there are regulations that are effectively applied. • The monument heritage is preserved in physical and functional aspects. • The intangible heritage aspects assessed in the survey are fully preserved. • They do not have contamination of historical urban landscape. • They have no sources of environmental pollution. • They have a diversity of sources of employment (9 sectors) and their main sources of employment are in the following order: 1) Commerce and services; 2) Culture and Tourism; 3) Industry and primary activities; 4) Higher education; 5) gastronomy and 6) administrative activities. • Their distances are walkable, the car is not essential, the most common means of transportation is in the following order: 1) pedestrian; 2) public transportation and 3) automobile. • They have no insecurity
To Find the characteristics of the cities in the ranges below the average of 188 points. (12 cities)	• In 10 cities, tourism partially displaces housing. • In 6 cities there is no housing offer for all social strata. • In 5 cities the land use regulations do not apply. • In 7 cities, tourist housing affects habitability and there are no regulations in this regard. • In 6 cities there is no access to loans for housing in the historic

Board 7. Coincidences and relations at the global and regional level, in the cities with the best average and in those with the lowest average. (1)

OBJECTIVE	COINCIDENCES
(...)To Find the characteristics of the cities in the ranges below the average of 188 points. (12 cities)	• (...)center and in 5 there are no subsidies or incentives for property conservation. • The order of the dominant land uses of these 12 cities is as follows: Commerce and services; 2) tourism; 3) administrative; 4) housing; 5) culture; 6) religious, 7) educational, 8) health, 9) sport. • In 9 cities, private properties partially reflect conservation. • They have diverse sources of contamination of the historic urban landscape • Only 4 cities do not have any source of pollution. • The Order of the main sources of employment is as follows: 1) Commerce and services; 2) Tourism; • 3) Administrative; 4) Primary sector and culture; 5) Health, Education, informal. • In 5 cities the habitability is affected by insecurity.

Board 7. Coincidences and relations at the global and regional level, in the cities with the best average and in those with the lowest average. (2)

Recommendations and opportunities to improve habitability policies in World Heritage Cities.

The cities participating in the study, in general, obtained good averages, determining that they are habitable. The challenges of the cities with the lowest rating are mainly in terms of mobility, protection of the use of housing and the sustainable development of tourism, so that tourism does not dominate or does not become the only activity of the site.

The following practices and recommendations emerge from the observation of the tables of findings mentioned above, and from the review of the objectives of UN-HABITAT, the Global Liveability Index and the World Bank, leading organizations in the study of habitability.

Demographic Data

It was found that in several cities there is a lack of demographic information on current population figures, migration and unemployment rates. The recommendation is that cities should be able to collect and constantly update data on the composition of population groups, in order to provide information for the proper design of public spaces and services according to their dynamics and needs. The growth of some cities has generated the complexity to identify demographic information within the perimeter subscribed in the list of world heritage; some cities reported having the demographic information of the entire territory of the city, but without any clarity about the specific data of its historic centres.

Social Dimension

The recommendations arising from the study in the social dimension are:

- Promote, with the participation of neighborhood organizations, cultural programmes that reinforce the identity and sense of place of the local population. The active community organization, through neighborhoods councils, generates the maintenance of traditions and in general of intangible heritage; it is they that organize traditional and/or religious festivals and festivals that generate cohesion in the community, basis for sustaining habitability.
- Promote actions so that the community preserves its traditions, gastronomy, clothing and in general its intangible heritage.
- Respect the genuine customs and customs of the host community, and avoid objectification of the local culture.
- Strengthening programs of social and sports activities, for that matter, it is important to provide sports spaces, since it was reported as a major lack in world heritage cities.
- Establish measures and plans to ensure that tourism does not displace local inhabitants, establishing policies for sustainable tourism, as well as housing, such as those related to basic needs for their quality of life: employment, education, health and mobility.
- Encourage the redensification of housing in historic centres, through policies that show the value of the world heritage site and its quality of life.
- Management of a sustainable tourism activity, taking care of the principles of the Charter of Sustainable Tourism that include involving the host community in the planning and conservation of heritage and in which tourism brings benefits to the inhabitants of the locality. The fact that several cities with above-average ratings indicate that tourism can be received without this activity displacing housing, shows that tourism activity is strongly linked to world heritage cities, they both can coexist with habitability.
- Integrally manage urban development that protects the use of housing land and that it is not displaced or invaded by functions that affect the quality of life. The powers of municipal authorities to grant land use permits are an important tool for maintaining the balance of uses necessary to maintain habitability.

Physical Dimension

- To plan urban mobility that is not based on vehicles (the main source of pollution of the cities involved in the study), and which considers that the best-qualified cities, reported that the transfers are made first by walking and second by public transport.
- Provide living and housing conditions for all social strata.
- To regulate the load capacities of the monuments, avoiding the saturation of visits and activities in and around them.
- Promote policies of subsidies and tax incentives for the conservation of private property in the historical heritage context.
- Prioritise the use of land for housing, education, health, sports, and control that there is no excess use of land for trade and tourism services, which affects the presence and balance of other uses.
- Follow UNESCO recommendations on urban landscape, mainly those related to the regulation of informal trade and visual pollution.

Functional Dimension

As could be observed, of the four dimensions considered in the study, the functional dimension was the one that obtained the best rating, that is to say that the world heritage cities in general have adequate functionality standards, so the greatest spaces of opportunity to improve habitability are in the social and physical dimensions. Notwithstanding the above, the following recommendations for functional dimension factors emerge from the questionnaires and its analysis:

- Diversify the sources of employment, as in several cities are currently concentrated in trade and tourism services. The areas of education, health, culture, and creative industries can complement the supply. The health crisis of 2020 showed how fragile the sites whose only productive function is tourism income. The cities that obtained the highest qualification reported up to 9 productive sectors in the city, while those cities with low qualifications, only base their productive activity in trade and tourism. We observe throughout the study that tourism activity generates the increase in the costs of living and generates tourist housing that bets on the generation of money in the short term and not on long-term solutions. This causes the inhabitants to leave the historic centres. At this juncture, there are cities that propose rethinking cities and their vocations, coinciding that the digital economy, artistic production, scientific research, as well as the student vocation can be good options for the future of world heritage cities.
- Review and supplement mobility:

25 cities replied that the car is not essential to travel, and it was also identified in half of the cities as the main cause of pollution, which makes it feasible to raise in urban studies the inclusion of pedestrianisation programmes, cycle lanes and public transport to replace the car.

One of the most repeated deficits in urban infrastructure worldwide is accessibility for persons with disabilities.

As part of The human rights, the goal of becoming inclusive cities must be met, and this idea is reinforced by the observation that several cities state that their most common population in historic centres are retired (senior citizens) which usually have accessibility needs.
The cities that reported modifications in the uses of public spaces, derived from the pandemic, noted the expansion of sidewalks, reduction of vehicles and authorizations to provide restaurant and cafeteria services in outdoor public spaces, aspects that affect the mobility in historic centres.

Security Dimension

Most cities stated that their habitability is not threatened by some kind of insecurity. In this sense, it would be interesting for another study to investigate the reasons that keep them safe, for example, if it is due to social cohesion, or because there are more job opportunities or because tourist sites are more guarded, or many others.

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