

CULTURAL HERITAGE IN ACHIEVING SUSTAINABLE URBAN DEVELOPMENT IN HERITAGE CITIES

DR. NARJIS HUSSAIN ALI

MIDDLE TECHNICAL UNIVERSITY, EMAIL: NARARCH84@MTU.EDU.IQ

RAFAL ALAULDEEN ABDULMAGED

MIDDLE TECHNICAL UNIVERSITY BAGHDAD IRAQ

EMAIL: RAFAL_ALAULDIN@MTU.EDU.IQ

Abstract:

With the increasing challenges facing heritage cities, there is growing recognition of the importance of cultural heritage and its potential for developing heritage cities. The concept of sustainable urban development based on cultural heritage has not yet become mainstream. The potential of cultural heritage must be unleashed to achieve sustainable urban development, especially in heritage cities. Cultural heritage offers solutions to urban challenges and contributes to well-being for communities. Urban design principles may contribute to investing in cultural heritage as a resource for sustainable urban development in heritage cities. Thus, the research problem as (The knowledge gap regarding the effectiveness of cultural heritage in achieving sustainable urban development in heritage cities, and the contribution of urban design principles to this). Assuming (the effectiveness of cultural heritage in achieving sustainable urban development for heritage cities, through following specific design principles that work to invest cultural heritage in heritage cities). The study dealt with the analysis of the city of Fez, the old city in Morocco, with the possibility of benefiting from it from other heritage cities, including Iraqi cities. The research reached the effectiveness of cultural heritage in enhancing urban development for heritage cities by following specific urban design principles.

Keywords: Social development, Cultural development, Environmental development, Economic development, Urban

INTRODUCTION:

Cultural heritage, both tangible and intangible, plays an important role in sustainable urban development and is a driver of it. It is a factor for competitiveness, an opportunity for innovation and entrepreneurship, and provides environmentally friendly solutions and an enabler of social cohesion. It also provides communities with identity and spatial belonging. This requires leveraging the potential of cultural heritage to promote sustainable urban development, particularly in heritage cities, by adopting urban design principles that address the environmental, cultural, social, and economic aspects of sustainable urban development. The research highlights the effectiveness of cultural heritage in promoting sustainable urban development in heritage cities from an environmental, cultural, social, and economic perspective, and how to promote sustainable urban development by activating the required design principles that investment cultural heritage as a resource for sustainable urban development in heritage cities.

Research Problem:

The knowledge gap regarding the effectiveness of cultural heritage in achieving sustainable urban development in heritage cities, and the contribution of urban design principles to this.

Research Hypothesis:

The effectiveness of cultural heritage in achieving sustainable urban development for heritage cities, through following specific design principles that work to invest cultural heritage in heritage cities

SIGNIFICANCE OF THE RESEARCH:

- Providing knowledge about sustainable urban development and its pillars, and the relationship between cultural heritage and sustainable urban development in heritage cities.
- Providing knowledge about urban design principles for achieving sustainable urban development in heritage cities.
- Analyzing a case study of an Arab heritage city with an authentic and unique heritage character, listed by UNESCO as a World Heritage Site in 1981, to extract design principles for utilizing cultural heritage to promote sustainable urban development and the possibility of applying them to other heritage cities, including Iraqi cities, which are suffering from urban challenges and cultural decline.

1- CULTURAL HERITAGE DEFINITION:

Cultural heritage is defined as a set of resources inherited from the past that reflects and expresses the continuity and evolution of beliefs, values, knowledge, and traditions. It encompasses all aspects of the environment resulting from interactions between people and places over time. UNESCO defines heritage as "our heritage from the past, what we live with today, and what we pass on to future generations. It is not limited

to material objects, whether artifacts, buildings, historical remains, or anything else." The importance of cultural heritage is twofold:

- Cultural heritage as a sector of activity that provides employment opportunities and generates growth (economic development and other dimensions of development)
- The spread of social and economic impacts into other areas, such as agriculture, regional development, the environment, science, tourism, education, technology, social cohesion, innovation, and intercultural dialogue.

Cultural heritage is made up of human objects or relics from past eras. The concept of archaeological heritage includes structures, constructions, groups of buildings, sites, movable objects, and monuments in relation to their context, whether located on land or underwater. According to the Paris Convention, UNESCO distinguishes two types of heritage: cultural and natural. Cultural heritage includes elements such as architectural works, paintings, sculpture, and spaces, including archaeological sites of universal value from an aesthetic, historical, anthropological, or ethnological point of view. Natural heritage includes biological, natural, geological, and physiological formations and distinct natural sites of universal value from a scientific or naturalist perspective (Semellawy, 2011: p. 64). Thus, two types of cultural heritage can be distinguished:

- Tangible or physical heritage: This includes tangible heritage, making it worthy of future preservation.
- Intangible cultural heritage: This includes practices, representations, expressions, knowledge, music, dance, theater, and religious ceremonies that are passed down from generation to generation in response to their nature and interaction with the surrounding environment, providing them with a sense of identity (Kawthar, 2022: p. 38).

2- Sustainable Urban Development:

Sustainability, as an open-ended term, is similar to other powerful and important terms such as freedom, justice, patriotism, truth, beauty, and faith. These concepts are matched by their direct ability to inspire. They defy simple definition and are the most commonly used words to powerfully motivate individuals and cultures. The word sustainability brings together social, environmental, and economic goals into one. These social, economic, and environmental objectives interact with each other in the real world in complex and unpredictable ways (Condon 2008: p. 5). This definition encompasses a number of complexities, the most fundamental of which lie in the implicit limits of planetary resources and the possibility that nature's resources may be out of balance. In short, the environmental materialist view of the planet forms the basis of the sustainability model. This contrasts with the prevailing schools of economic development theory, which view the Earth and its resources without absolute limits (Condon 2008: p. 5). Sustainable development, according to the Brundtland Commission, is defined as development that provides for actual needs, taking into account future generations and their ability to obtain them. This definition has been criticized for its centrality and anthropocentrism, as well as for its lack of comprehensiveness and definition, the failure to specify these needs and their quality, and the lack of clarification of practical and applied solutions for its implementation. Others have defined it as development that improves environmental and ecological systems and achieves human safety in the long term (الطار, 2013, 132). Sustainable development is also defined as a strategic approach and a process of change to achieve Long-term sustainability goals: a balanced social and ecological system. It emerged as a global response to the environmental crises resulting from population growth and rising social inequality. Bibri described sustainable development as "a planned and strategic development process that works to achieve a balance between economic, social, and environmental values and goals, i.e., a balance between the need for economic development and prosperity with environmental protection, integrity, and social justice" (Bibri 2018, 103). One of the main goals of sustainable development is to bring people together to weave parts of a city into a cohesive whole, and to increase access to public services and employment. In addition, sustainable areas are those created to support sustainable living with a primary focus on economic, social, and environmental aspects. This is particularly important in historic areas, which tend to represent a variety of ideals of a city's identity, including its history and culture on the one hand, and its local economic viability on the other (www.eprints.lincoln.ac.uk/id/eprint/8490). The difference between sustainability and sustainable development can be distinguished as the former as a positive and specific process that encompasses all human activities and is a process that links the well-being of families and the ecosystem into a mutually supportive whole. It can be applied to any product, idea or policy to justify it or enhance its attractiveness as environmentally friendly. The latter as a goal for limited situations. Thus, sustainable development is a potential component of sustainability. However, both concepts embrace the long-term and comprehensive social environment, economic, environmental and cultural issues (Rodwell 2007, 57).

3- Key Pillars of Sustainable Urban Development:

The Key Pillars of Sustainability: The three key pillars of sustainability emerging from the World Summit on Sustainable Development, "Our Common Future," are the capacity for social, economic, and environmental sustainability. However, the list was soon revised to include culture and governance as important sustainability measures. These factors, while not considered in the past in international efforts, are now essential for successful development:

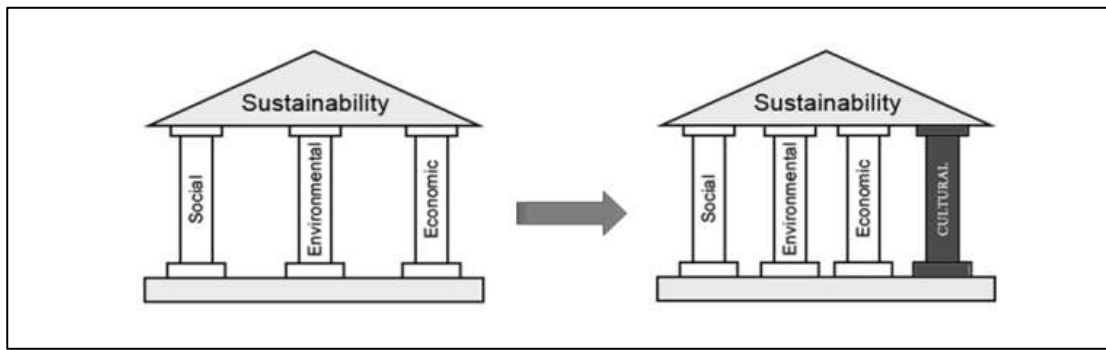


Figure 1-1 show pillars of sustainable urban design (Friedman, 2021)

Social:

Social sustainability is often given less attention than economic and environmental sustainability. However, it is essential to develop social sustainability to accommodate the radical shifts in lifestyles, values, and technology required to implement economic and social sustainability (Friedman, 2021: p. 16). Social sustainability refers to the maintenance and protection of social and human capital, including collective engagement, a healthy civil society, equal rights, social cohesion, cultural identity, diversity, and resilience. It also includes moral values such as camaraderie, patience, brotherhood, discipline, pluralism, honesty, and laws. Human capital includes education, health, and nutrition. Social capital requires the maintenance and renewal of shared values in communities, religious and social groups (:2013 العطار p. 152). Friedman pointed out that social sustainability includes the development of social capital and resilient communities, public health, human and labor rights, and social support. It is a symbiotic pillar with other economic and environmental sustainability, in addition to public contribution and the achievement of a sustainable health care system by encouraging physical fitness and encouraging walking and the use of bicycles in public spaces to reduce cardiovascular and heart diseases and diseases associated with diabetes (Friedman 2021: p. 17).

Cultural

Culture is a very important issue in economic, social, and environmental models. Hilgard Kort, in *The Aesthetics of Sustainability*, points out the lack of cultural considerations in sustainable development. He also emphasizes the lack of attention to the cultural and aesthetic dimensions of sustainability in the natural and social sciences. Culture is defined as “a complex matter involving knowledge, art, law, morals, and the capabilities and habits of human beings acquired by society.” Thus, the purpose of cultural diversity is “the different ways people and societies create, produce, and distribute things.” More recently, culture has become part of the social aspects of sustainability. Cultural development is defined as a collective process, often involving large-scale innovations, that brings about many changes in people’s lives and entails development and long-term benefits for society (Irani 2014: p. 1). Cultural sustainability is vital through promoting and preserving public culture. Local traditions have a significant impact on society, directly or indirectly. Old buildings are visual reminders of a community’s history, creating a connection with the past and potentially inspiring engineers and architects, thus ensuring the quality of buildings and designs in the future. Preserving and restoring old buildings can be integrated into new construction (Friedman 2021: p. 17). Addressing the concept of sustainability in architecture prioritizes aspects related to values, traditions, customs, as well as cultural and symbolic aspects. Architecture’s connection to these aspects opens the door to successful applications that support cultural communication and increase communication between generations (2013 العطار: p. 145). Culture is considered a key tool for marketing heritage and historical cities and attracting capital and individuals. In addition to playing an important role in environmental renewal and social cohesion, it also plays a significant role in marketing cities and economic development. It contributes to developing a global image of historical cities, enhancing interaction between the global economy and social aspects, and creating a distinctive image of the city (74 ,2018 عبدالله).

Economic:

Economic sustainability is one of the most important priority pillars of sustainability. In urban planning, current economic decisions impact future generations. Investments and businesses in a community will determine the job opportunities residents will be able to access in the future (Friedman, 2021: p. 18).

Environmental:

Sustainable development must take into account the environmental impact of development, including roads, open spaces, and housing. It is also important to consider the impact of building materials, their long-term performance, and their ability to be redeveloped. Environmental sustainability sets limits for meeting current needs without compromising the quality of the environment and ecosystem, ensuring that it remains capable of supporting future generations (Friedman 2018: p. 19). The environmental dimension of sustainable development includes ecosystem prosperity, a state in which the ecosystem maintains quality and diversity, sustains all forms of life, and adapts to provide future options. Sustainable development must aim to produce a

city that is user-friendly, not only in terms of form and energy efficiency, but also in its function as a place to live (Al-Saffar 2018, 115).

Governance:

Sustainable governance must be considered sustainable, adaptable, and capable of implementing long-term sustainable plans. Sustainable governance aims to develop sustainable political outcomes and instill a long-term focus on political decision-making. An effective political system encourages citizen participation of all ages to create a qualitative communication of ideas and actions (Friedman 2018: p.). Governance consists of the traditions and institutions that exercise power in a country and depends on the government's ability to effectively frame and implement policies, the commitment of citizens and governments to governing institutions, and the socioeconomic interactions between them. Environmentally friendly, participatory, accountable, transparent, effective, equitable, and inclusive urban management can deliver sustainable development, and the quality of human settlements and urban governance impacts the lives of billions of people. (Al-Saffar 2018, 116)

The relationship between cultural heritage and sustainable urban development in heritage cities:

There is a close relationship between cultural heritage and sustainable urban development in general, and in heritage cities in particular. Cultural heritage may contribute to sustainable social, economic, environmental, and cultural urban development. Cultural heritage serves as a driver of sustainable development, as the Sustainable Development Goals focus on preserving heritage and raising awareness about the importance of preserving heritage and, consequently, identity. On the other hand, tangible and intangible cultural heritage can be used as a catalyst for sustainable growth and can contribute strongly to social cohesion, enhance a sense of identity, and motivate local communities and youth. Furthermore, cultural heritage can be considered a resource. Vitality, competitiveness, environmentally friendly solutions, and opportunities for innovation and entrepreneurship. Cultural heritage plays an important role in the tourism industry and job creation. Cities and regions, especially those facing difficult circumstances, can benefit greatly from their cultural heritage. (CULTURAL HERITAGE AND SUSTAINABILITY Practical Guide p. 19). The role of cultural heritage in sustainable urban development in heritage cities can be defined as:

- Economic development. Preserving cultural heritage has a significant economic impact on heritage cities. Heritage sites attract tourists, which creates job opportunities that boost local economies. Preserving cultural heritage enhances the value of real estate and businesses and improves the overall quality of life for residents.

TABLE 1-1 show relation between cultural heritage and economic development

Economic Benefits	Description
Tourism Revenue	Cultural heritage sites attract tourists, generating revenue for local economies
Job Creation	Preservation and maintenance of cultural heritage sites create employment opportunities
Increased Property Values	Cultural heritage preservation can increase property values, making areas more desirable
Local Business Boost	Cultural heritage can boost local businesses, such as restaurants, shops, and hotels

Environmental development : Cultural heritage contributes to environmentally sustainable development. With human consumption of natural resources globally increasing in unsustainable ways, many local communities have developed specific practices and patterns related to respect for the environment and nature, in addition to cultural heritage. Cultural heritage also contributes to the preservation of historic buildings and sites and reduces the construction of new buildings, thus reducing the environmental impact of urban development. Cultural heritage also promotes sustainable practices, such as the reuse and recycling of historic building materials, as illustrated in the attached figure: <https://www.numberanalytics.com/blog/cultural-heritage-and-sustainable-urban-development>.

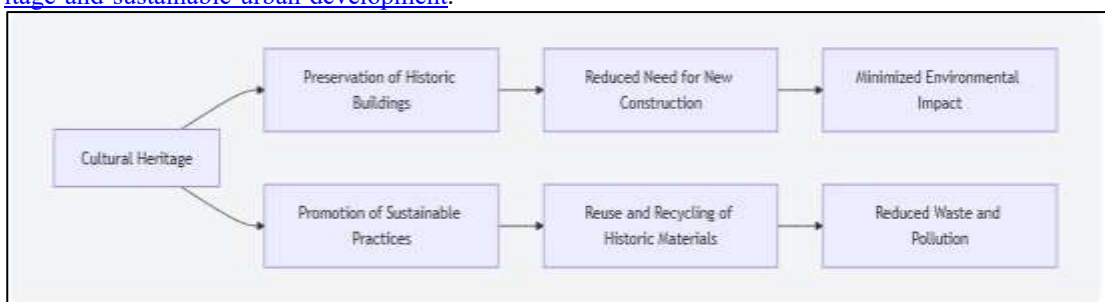


Figure1-2 show the relation between cultural heritage and environmental development

Social development: Cultural heritage plays a pivotal role in achieving social development through social cohesion and community participation. Heritage sites embody a shared identity, guide communities towards a sense of belonging, promote social integration, and encourage all groups to participate in the heritage conservation process. (<https://www.numberanalytics.com/blog/cultural-heritage-and-sustainable-urban-development>)

The role of culture in the social dimension has been defined through the following characteristics:

- Promoting the values, diversity, and cultural principles of societies.
- Focusing on the quality of participation and vitality of society.
- Partnership in decision-making and mutual respect among all segments of society are essential elements of cultural sustainability.
- Preserving places, rituals, and traditions to achieve optimal communication with citizens and protect social identity.
- Preserving tangible and intangible cultural heritage means preserving the spirit of the place and strengthening the community's connection to and sense of belonging to it.
- Preserving cultural heritage facilities by using them to meet the community's need for shelter, preservation, and maintenance (al-shami-2023: p. 4)

- **Cultural Development:** Cultural heritage plays a pivotal role in enhancing community resilience and consolidating cultural identity. Cultural heritage practices—such as traditional festivals, language preservation, and community rituals—are essential components of social and cultural capital, creating networks of shared knowledge and mutual support. They also preserve urban heritage landmarks and contribute to the well-being of communities. (taqa 2025: p. 137)

Urban design principles to promote sustainable urban development in heritage cities:

Sustainable urban development in heritage cities must include three axes to ensure its success:

- The urban and environmental aspect: This relies on the preservation of historic buildings and tourist attractions, the preservation of natural resources, and ecological balance.
- The social and cultural aspect: This relies on raising awareness among current generations about preserving the environment and urban heritage for future generations, and involving civil society organizations and local residents in development processes through awareness-raising and contributing to tourism activities to generate income.
- The economic aspect: This relies on the use of local environmental resources to produce handicraft products, providing job opportunities for the local community, and presenting them as new markets to create high-level and sustainable tourism development (Esmail_2019: p. 432) To achieve sustainable urban development in heritage cities, this is done through a set of design principles represented by:

1- Social development :

To enhance the social aspects of sustainable urban development, this can be achieved through the principles of urban design:

- Providing public activities such as schools, medical services, and sporting events
- Security against crime
- A sense of place and belonging to the community
- Maintaining a network of social activities
- Developing community involvement in the decision-making process
- Providing basic needs for the elderly, children, and people with special needs
- Efficient, accessible, and safe public transportation users
- Providing public spaces, parks, and seating areas (Lee & Chan, 2006: p. 625)

2- Economic development:

Lee & Chan indicated that enhancing economic sustainability through urban design principles is represented by:

- Efficient use of land and space
- Efficient development of changing needs
- Multiple uses within the same building or area
- Establishing local businesses and activities
- Diversity in functional activities
- Building design and overall appearance
- Access to work
- Providing local jobs
- Managing buildings, activities, and spaces (Lee & Chan, 2006: p. 625) chan-2013:p.622)

3- Environmental development:

Urban design principles for achieving environmentally friendly urban development include:

- Air quality: pollution rates and emissions of nitrogen oxides and sulfur dioxide
- Global warming and greenhouse gas emissions in the residential, commercial, and industrial sectors
- Water: average rainfall, total water consumption, availability of waterways in the city, quality of drinking water, water for use, shortages in water distribution
- Land: green spaces, parks, urban sprawl
- Waste: total solid waste, recycled waste, waste management index, and solid waste

- Ecological footprint: ecological footprint
- Environmental hazards: vulnerability to environmental hazards and exposure to environmental disasters
- (Report of the National Academies of Science, Engineering, and Medicine, 2016:p.17)

4- Cultural development:

Achieving a balance between heritage conservation and urban development requires careful planning and coordination. The following urban design best practices can help cities achieve this balance:

- 1- Conduct comprehensive cultural heritage assessments to identify important sites and landmarks
- 2- Engage with local communities to ensure their participation in the conservation process
- 3- Develop comprehensive heritage conservation plans that balance conservation with development needs
- 4- Implement sustainable development practices, such as green buildings and energy-efficient technologies
- 5- Innovative approaches to heritage conservation. Innovative approaches to heritage conservation are critical to preserving cultural heritage in the face of urban development. Examples include:
Using digital technologies, such as 3D scanning and virtual reality, to document and preserve cultural heritage sites.
- 6- Integrating cultural heritage into urban design, through the use of historic building materials and architectural styles.
- 7- Developing community-led conservation initiatives that empower local communities to take ownership of cultural heritage conservation.

<https://www.numberanalytics.com/blog/cultural-heritage-and-sustainable-urban-development>

Table 1- 2 showing vocabulary of cultural heritage in achieving sustainable urban development by following urban design principles in heritage cities

Pillars of sustainable urban development	Vocabulary of Cultural heritage	Urban design principles
Econom- ical de- velop- ment	Tourism revenue Job creation Increased property values Local business boost	• Efficient use of land and space • Efficient development of changing needs • Multiple uses within the same building or area • Establishing local businesses and activities • Diversity in functional activities • Building design and overall appearance • Access to work • Providing local jobs • Managing buildings, activities, and spaces
Social develop- ment	Social Empowerment, Co- hesion, and Equality Promoting community val- ues, diversity, and cultural principles. ▪Partnership in decision- making ▪Preserving places, rituals, and traditions ▪Preserving tangible and intangible cultural heritage ▪Preserving cultural herit- age facilities by using them to meet community needs.	• Providing public activities such as schools, medical services, and sporting events • Security against crime • A sense of place and belonging to the community • Maintaining a network of social activities • Developing community involvement in the decision-making process • Providing basic needs for the elderly, children, and people with special needs • Efficient, accessible, and safe public transportation users • Providing public spaces, parks, and seating areas
Environ- mental develop- ment	Preserving historic build- ings, minimizing new con- struction, and minimizing environmental impact. Promoting sustainable practices, using heritage building materials, and minimizing waste and pol- lution.	Air quality • Global warming and greenhouse gas emissions • Water • Land: green spaces, parks, urban sprawl • Waste • Ecological footprint • Environmental hazards

Cultural development	Promoting public culture Strengthening identity and a sense of belonging Preserving arts and creative industries, language, festivals, and rituals Preserving heritage landmarks and buildings Creating a distinctive image for the city	1- Conduct comprehensive cultural heritage assessments to identify important sites and landmarks 2- Engage with local communities to ensure their participation in the conservation process 3- Develop comprehensive heritage conservation plans that balance conservation with development needs 4- Implement sustainable development practices. 5- Innovative approaches to heritage conservation. Examples include: Using digital technologies, such as 3D scanning and virtual reality, to document and preserve cultural heritage sites. 6- Integrating cultural heritage into urban design 7- Developing community-led conservation initiatives
-----------------------------	---	--

Case Study: Fez (Old City) in Morocco

The city of Fez includes the old city (Fez el-Bali), the new city (Fez el-Jdid), and the area connecting them. The old city is characterized by its integrated spatial design, organic morphology, narrow, winding alleyways, and distinctive traditional character. When UNESCO listed the old city as a World Heritage Site in 1981, it was at risk of collapse due to overcrowding, neglect, the extension of water networks, the neglect of traditional crafts in the city, and environmental imbalance. The authorities planned a comprehensive strategy to preserve the old city of Fez to ensure better infrastructure, focusing on the following priorities: improving the road network and creating an easily accessible road network; meeting commercial and social needs in the heart of the old city; relocating polluting industries outside the city to a new industrial zone; improving the urban environment; creating active tourism flows; reducing poverty and providing job opportunities for young people; attracting foreign investment for real estate development; promoting the city's social and economic development; and preserving the city's authentic character. Cultural heritage tourism contributes 80% of tourism in Morocco. (boussaa & madanddola-2024;p. 1237) . Restoration and rehabilitation projects have multiplied, especially for some mosques, schools, historical spaces and fortifications. Other projects aimed to improve the appearance of paths and facades within the framework of urban development. Recently, projects have emerged to repair traditional houses and convert them into guest houses, treat dilapidated buildings, and demolish houses and shops that pose a danger to residents. The area has been divided into 3 sections: conservation and restoration areas, urban rehabilitation areas, and urban renewal areas. With the beginning of the third millennium, some historical spaces began to host artistic and cultural activities and festivals that gave an important impression of the city and benefited from the economic point of view and contributed to its development and were compatible with the city in terms of its cultural nature, with the employment of historical monuments with new functions appropriate to the nature of the region, such as converting the Batha Palace into a museum of arts and customs and converting the northern tower into a museum of traditional weapons and firearms. The original architectural forms of the tower were not touched. The conversion of Dar Adil into an annex to the Music Institute, and the conversion of some houses into guest houses after their restoration, contributed to creating a significant dynamic in the field of traditional construction within the city and a clear increase in traditional building materials (اقصبي 2018), in addition to interest in open spaces, the restoration and rehabilitation of historical squares, and interest in improving traffic in the old city by creating underground parking spaces and another parking space in Zain Al-Abidin Square, establishing a network of motorways on the outskirts of the old city, and creating four new tourist routes (بوجددي 2020: p. 243). Polluting industries were also relocated to industrial areas outside the city, and public spaces were created to reduce the density of residential neighborhoods and select environmental improvements were made, including the reorganization of traditional activities within the city, improving the waste management system, establishing water drainage networks, and expanding the scope of existing programs to improve the urban environment, such as demolishing monuments, building community facilities, landscaping urban gardens, and reinforcing dilapidated buildings. The rehabilitation of the old city also contributes to economic returns through investment in tourism, investment in traditional housing, creating job opportunities, and increasing investment in small projects and commercial professions, as commercial and service activities extend into a series of large markets. Along the main roads and in smaller markets branching off from them. Small, scattered clusters permeate the urban fabric. Rehabilitation achieves three goals: improving the appearance of Medina through the repair and cleaning of buildings, streets, infrastructure, public spaces, and monuments; preserving Medina's traditional character and cultural heritage for future generations; and ensuring its continuation as a productive and vibrant city (Unit for Housing and Urbanization, 1999).



Figure 1-3 Arial view of (old city) faz in morocco(unit of housing and urbanization -1999)

Local residents have contributed to the rehabilitation of the city by rehabilitating homes and tourist attractions, and they play an important role in maintaining social harmony and economic growth in the old city. The strategy for preserving the old city has specific social and cultural objectives, including: protecting local culture by encouraging residents to stay in the old city, linking tourism to human development and integrating it into the economic system, developing the capacities of local stakeholders, which has contributed to the emergence of new and innovative sectors, working to achieve gender equality by providing job opportunities for women, and involving all stakeholders in decision-making in a coordinated manner to implement governance principles.(boussaa & madanddola-2024: p. 1240)



Figure 1-4S
Cultural activity in hertiage cities
(اقصابي -2018)

Al batha museum of arts and customs

The table1-3 show vocabulary of cultural heritage in achieving sustainable urban development and urban design principles in faz city

Pillars of sustainable urban design	Cultural heritage	Urban design principles
Environmental development	Reinforcing dilapidated heritage buildings Demolishing historic buildings that pose a threat to residents Repurposing heritage landmarks Using heritage building materials such as wood	Environmental improvements include: relocating polluting industries to industrial areas outside the city improving solid waste management systems and water drainage networks creating public spaces to reduce residential density improving the urban environmenturban landscape
Social development	Community Participation	Improving the road network and creating an accessible road networkRestoring and maintaining

	Social Cohesion and Citizen Contribution Achieving Equality and Social Justice	historic squaresEstablishing community facilities and servicesMeeting social and commercial needs in the heart of the old cityImproving services and infrastructure in the old cityEstablishing a motorway network on the edges of the old city and underground parking
Economic development	Investing in Tourism Investing in Small Projects and BusinessesIncreasing Demand for Residential Real Estate Creating Job Opportunities Contributing to Economic Returns Investing in Traditional Residential Buildings	Rehabilitation of heritage buildings Improving access to the city Dedicating historic urban spaces for artistic and cultural activities and festivals Repurposing residential buildings into guesthouses and hotels Improving paths and facades
Cultural development	Preserving the city as a cultural heritage of humanity Ensuring its continuity as a productive and vibrant city Protecting the city's culture by supporting local residents in the old city Preserving traditional craft, traditions, and holding cultural festivals.	Assessing the city's cultural heritage Improving the city's overall appearance through the restoration and cleaning of streets, public spaces, infrastructure, and heritage monuments Involving stakeholders and local residents in design decisions Preserving the city's authentic and traditional character Using heritage architectural and urban vocabulary in urban design Repurposing historical spaces Repurposing historical monuments into functions that suit the nature of the region, such as historical museums

CONCLUSION:

There is a strong relationship between cultural heritage, both tangible and intangible, and sustainable urban development. Urban design principles can contribute to making cultural heritage a source of sustainable social, economic, environmental, and cultural development, especially in heritage cities. This can help make them vital and vibrant cities in the future, preserving their cultural identity in the face of challenges and urban deterioration. Through a study and analysis of a heritage city, Fez (the old city) in Morocco, the research concluded that cultural heritage is effective in promoting sustainable urban development in cities by following specific design principles. From an environmental perspective, cultural heritage works to preserve historical and heritage buildings, reduce new construction, and minimize environmental impact, in addition to promoting sustainable practices and the use of heritage building materials that reduce loss and pollution. From a social perspective, cultural heritage provides social empowerment, equality, cohesion, community participation, and the preservation of customs and traditions. From an economic perspective, cultural heritage has increased tourism revenues, created job opportunities, enhanced spatial value, and enhanced local employment opportunities. From a cultural perspective, cultural heritage has enhanced the general culture of society, preserved heritage landmarks and buildings, fostered a sense of belonging, preserved creative industries, arts and rituals, and created a distinctive image for the city.

REFERENCES

- Al saffar ,mazin. (2018).Toward an integrated smart sustainable urbanism framework in the historic centre of Baghdad. (Old Rusafa as a case study), Doctoral thesis (PhD), Manchester Metropolitan University.
- Al-mosawi, aqeel qusay. (2017). "Towards Sustainable Urban Design Strategies for historic city center in iraq/Development of an Assessment Approach for Urban Regeneration Projects." To the Faculty of Spatial Planning ,TU Dortmund University . germany : In fulfilment of the requirements for the degree ofDoctor of Engineering (Dr.- Ing.).
- Al-Shami Hanan Waleed, Al-Alwan ,Hoda A.S., Abdulkareem, Tamarah A. ,(2023). ” Cultural sustainability in urban third places: Assessing the impact of 'Co-operation in Science and Technology' in cultural third places”, Ain Shams Engineering Journal.
- Bibri, Elias Simon. (2018).smart sustainable cities of the future . Trondheim,Norway: Norwegian University of Science.
- Boussaa ,Djamel and Madandola ,Muhammed. (2024). Cultural heritage tourism and urban regeneration: The case of Fez Medina in Morocco
- CULTURAL HERITAGE AND SUSTAINABILITY Practical Guide
- El Semellawy, A. N. (2011). The European Imprint on the Architecture of Alexandria (1830–1930), Ain Shams University, Faculty of Engineering. Architecture Department Cairo

- Esmail, A., Y. (2019) sustainability between urban heritage and tourism development by participation in al-qasr. journal of engineering and applied science ,66(4),
- friedman , a vi (2021) .fundamentals of sustainable urban design . Montreal, QC, Canada: McGill University School of Architecture.
- Irani ,mazadak. (2014) Sustainable Development of Iranian Historical Cities with Focus on Cultural, Historical and Architectural Identities." Mediterranean Journal of Social Sciences ، iod:: 10.5901/mjss.2014.v5n7p647.
- Kawther , khawla karem .(2022) ” Hidden Orders in Heritage Urban Fabric in Iraq” , Engineering college, Baghdad university .
- lee, graceand chan ,edwin. (2006). "effective approach to achieve sustainable urban renewal in densely populated cities." In built environment and information technologies. International CIB endorsed METU postgraduate conference, Ankara (Turkey), 17. Mar. 2006 - 18. Mar. 2006.
- repoart of national academics of science . engineering .medicine-2016:p.17
- Rodwell ,d ennis. (2007) . Conservation and Sustainability in hisoric cities. Blackwell Publishing.
- Taqa ,Amer, (2025). The Role of Cultural Heritage in Sustainable Development, Research Journal Article.
- Unite for Housing and Urbanization Graduate School of Design, Culture in Sustainable Development Case Study: Fez, Morocco Rehabilitation of the Fez. (1999). Medina, Harvard University.
- اقصابي , منير , (2018) . مدينة فاس العتيقة : بين تحديات المحافظة وصعوبات التدبير
- الصفار,مهدي حسن مهدي . (2013) . "التنمية المستدامة ومشاكل التطوير العمراني لمركز الكرخ التاريخي . " رسالة ماجستير , جامعة بغداد , كلية الهندسة , قسم المعماري
- عبدالله , سالي فخري خلف. (2018) . إستراتيجيات الإحياء الحضري للمستدام للمراكز التاريخية - مركز الكرخ التاريخي حالة دراسية . اطروحة دكتوراه - قسم المعماري - كلية الهندسة - جامعة بغداد .
- العطار, علي داود. (2013) . "الثابت والمتغير الثقافي واثره في استدامة المدن الدينية ذات المزارات . " اطروحة دكتوراه - جامعة بغداد , كلية الهندسة , قسم الهندسة المعمارية .
- <https://www.numberanalytics.com/blog/cultural-heritage-and-sustainable-urban-development>
- <https://www.numberanalytics.com/blog/cultural-heritage-and-sustainable-urban-development>
- www.eprints.lincn.ac.uk/id/eprint/8490