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REGENERATION OF URBAN CULTURAL LANDSCAPES

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ABSTRACT: The search for identity, the sense of belonging to a particular place, is a fundamental aspect of quality of life, whether the person is an inhabitant of a small village or an urban metropolis. The unique character of a place is woven into its townscapes and streetscapes, the interplay of layout and diversity of the spaces, the distinctive architectural character of buildings, and cultural values associated with it. A place's essence, which defines its identity, is remarkably delicate and susceptible to swift erosion. The rapid pace of urbanization, changing socio-economic values, increasing commercialization, and insensitive, generic development practices are eroding the quality of urban life.

"If change is inevitable, we should moderate and control it to prevent violent dislocation and preserve the maximum continuity of the past." - Kevin Lynch. Years of neglect by the public sector and unchecked development by the private sector had left parts of the city in despair. These areas need transformational interventions to rejuvenate, ensuring long-term sustainability and vitality.

This research aims to understand the urban cultural landscapes and their rise. It also highlights the concept of authenticity and a shift toward a regenerative paradigm for cultural landscapes. The research then investigates the best practices associated with preserving and revitalizing these valuable urban assets. By looking at the various methods, the study aims to create a plan for the long-term restoration of urban cultural landscapes that takes into account both historical preservation and modern city needs.

KEY WORDS: Urban Cultural Landscapes, Urban Regeneration, Authenticity, Sustainable development

1. Urban culural landscapes

Cultural landscapes represent the "combined works of nature and of man" as designated in Article 1 of World Heritage Convention, 1992. They illustrate the progression of human society and settlement over time, shaped by the natural environment's physical challenges and opportunities, as well as by the evolving social, economic, and cultural influences, both from within and outside. The term "cultural landscape" encompasses various expressions of the interaction between humans and their natural surroundings. These landscapes often display sustainable land-use practices tailored to the characteristics and constraints of the natural environment, as well as a unique spiritual connection to nature. In 1992, the World Heritage Convention became the first international legal instrument to recognize and protect cultural landscapes.

UNESCO has classified cultural landscapes into three main categories:

- Clearly Defined Landscapes: Intentionally designed and created landscapes by humans, such as gardens, parks, and planned cities.
- Organically Evolved Landscapes: Shaped by continuous interaction between people and nature over time, such as rural landscapes, agricultural terraces, and ancient forests.
- Associative Cultural Landscapes: Valued for their spiritual, artistic, or cultural associations with natural elements, such as sacred mountains, pilgrimage routes, or battlefields.

Tangible Components

Urban cultural landscapes combine both tangible and intangible values. This, as a composite, represents the spirit of a place (ICOMOS).

ICOMOS defines tangible elements as those physical aspects that are observable and documented. Many places have a historic character that, to a certain degree, is evident today. In many cities, geological features, natural drainage patterns, and topography continue to be evident, which reflects the resilience of the urban landscape and how it has shaped development over time. These elements contribute to analysing and planning. Those tangible values are:

- Natural Systems
- Land Uses, Patterns, Clusters
- Spatial Organization
- Visual Relationships
- Topography, Surface Drainage
- Vegetation
- Circulation Systems
- Water Features, Natural and Constructed
- Non-Habitable Landscape Structures and Buildings
- Spatial Character, Form and Scale of Habitable Structures
- Vocabulary of Site Furnishings and Objects

These tangible elements define the overall character of urban cultural landscapes, along with the other intangible values inherent therein. Urban integrity is the extent to which the interaction of humankind with nature, which has created a built environment, i.e., the urban cultural landscapes, remain present today.

Intangible Components

The urban cultural landscapes reflect the traditions and values embedded in them in the past. It also expresses the ongoing interactions between humans and the built environment. They are the expression of people's ways of living life in a place. Those intangible values are:

- Festivals
- Traditional music, dance, performance
- Pilgrimage
- Worship
- Ritual
- Commemoration of past events
- Traditional practices
- Gathering place for native plants
- Gathering place for craft materials
- Iconic shared community place of memory and present use

2. Evolution of urban cultural landscapes

A historical shift in urban planning and design ideologies happened across four main eras. In the Pre-Industrial era, cities developed through organic growth, traditional architecture, and limited planning, resulting in structures that were primarily functional and regionally distinct. With the Industrial Revolution, urbanization accelerated, leading to the introduction of industrial architecture and a focus on urban renewal. The Modern era brought structured urban planning, globalization, cultural exchange, and a growing emphasis on preservation and conservation. Finally, the Post Modern era introduced principles of diversity, decentralization, and sustainable urban development, recognizing the need for adaptability and resilience.

The urban landscapes had a progression in design approaches. Initially, an artistic approach focused on objective aesthetics, resulting in urban façades that were visually pleasing but less concerned with function. This evolved into a functional approach, adding practical considerations to aesthetic ones, yielding more purposeful spatial structures. Subjective aesthetics, cultural meaning, history, and identity became very important in the perceptual/contextual approach. This made socio-spatial structures that were more relevant to the context. Lastly, the sustainable approach takes into account things like aesthetics, function, culture, identity, and ecology. This creates long-lasting social and spatial structures that put environmental, social, and cultural longevity first. This is the result of combining earlier approaches into a more complete framework.

3. Chaters, conventions and guidelines

The focus was on individual monuments and sites. The Athens charter acknowledged managing sites, while previous charters focused on individual monuments. This charter was then outdated by the Venice Charter, which acted as the milestone for the following charters and conventions. By the 1970s, sustainability had emerged as a vital concept, progressively integrated into heritage management charters. Its addition was meant to raise the value of heritage sites while also addressing their economic, social, and environmental aspects to make these places better all around. In 1992, the World Heritage framework formally recognized cultural landscapes. This recognition classified cultural landscapes into three categories. Post that, the emphasis shifted to integrating cultural landscapes in urban planning, sustainability, and the inclusion of intangible cultural heritage linked to landscapes.

Nara Document of Authenticity and Hoi An Protocols

In 1994, a conference in Nara, Japan adopted the landmark Nara Document on Authenticity. It builds upon the principles of the Venice Charter (1964) and focuses on the concept of authenticity in heritage conservation. The document talks about the difficulties of evaluating and protecting cultural heritage in various historical and cultural settings. It was made with help from UNESCO, ICOMOS, and the Agency for Cultural Affairs of Japan. Authenticity is multidimensional, encompassing local traditions, intangible values, and cultural contexts. The document states that the judgments of authenticity should be grounded in diverse information sources, including form and design, materials and substance, use and function, spirit and feeling, and location and setting.

The Hoi An Protocols were made to fill in some gaps in the Nara Document, especially when it came to managing heritage in Asia. They were made to help keep the authenticity of the region's unique cultural landscapes. The protocols emphasize the interconnectedness of physical heritage, intangible heritage, and cultural landscapes.

The protocols link the level of cultural significance to the test of authenticity. They explain how to rate and prioritize heritage items based on things like how rare they are, how well they are kept, and how authentic they are (Tab.1)

Dimensions of Authenticity					
	Location and setting	Form and design	Use and function	Essence	
	Place	Spatial layout	Use	Artistic expression	
	Setting	Design	User	Values	
	Sense of Place	Materials	Associations	Spirit	
	Environmental niches	Crafts	Changes in use over	Emotional impact	
			time		
Aspects	Landform and Vistas	Building techniques	Spatial distribution	Religious context	
			of usage		
	Environs	Engineering	Impacts of use	Historical associations	
	Living Elements	Stratigraphy	Use a response to	Sounds, smells and	
			environment	tastes	
	Degree of dependency	Linkages with other	Use as a response to	Creative process	
	on local	properties or sites	historical context		

Tab. 1. Various aspects and dimensions of authenticity (Source: Hoi An Protocol- Professional Guidelines for Assuring and Preserving the Authenticity of Heritage Sites in the Context of the Cultures of Asia)

The matrix of authenticity dimensions outlined in the Hoi An Protocols—comprising location and setting, form and design, use and function, and immaterial qualities—presents a holistic framework that transcends regional boundaries. Although developed in the context of Asia, these dimensions are universally applicable, offering valuable insight for heritage conservation efforts not only across Asia but also across world. Their relevance is embedded in the recognition that heritage significance arises from a confluence of tangible form and intangible meaning, regardless of geographic or cultural context.

Globally, the dimension of location and setting remains foundational. In historic European cities such as Edinburgh, Bruges, or Venice, the urban grain, spatial hierarchy, and vistas are inseparable from the identity and perceived authenticity of these places. Displacement of historical buildings from their original context, or encroachment by insensitive modern development, often results in a loss of spatial coherence and erasure of memory. This observation holds equally true in South Asian cities like Varanasi or Hanoi, affirming that spatial integrity is a cross-cultural anchor of authenticity.

The focus on form and design, encompassing architectural layout, materials, and techniques, is similarly central to conservation globally. European charters such as the Venice Charter and the Burra Charter reinforce this importance. However, the overemphasis on material purity can lead to "restorations" that sterilize history—producing aesthetic fidelity at the cost of lived heritage. The lesson here is shared: whether one is restoring a Romanesque abbey in France or a Mughal courtyard in Delhi, conservation should retain historic interventions and the patina of age as markers of time, not eliminate them in pursuit of a mythologized past.

In both global North and South, use and function are crucial to ensuring the continuity of heritage. Adaptive reuse strategies in Europe—such as transforming monasteries into community centres or industrial warehouses into housing—have succeeded not merely by preserving fabric, but by keeping these spaces relevant. Yet, this functional continuity often clashes with commercial imperatives. The same tension exists in Asian cities, where heritage structures are repurposed for tourism or high-end retail, thereby displacing traditional social functions and severing community ties. Thus, the challenge of preserving functional authenticity is a shared one.

Perhaps most critically, immaterial qualities—such as emotional resonance, spirit of place, values, and cultural associations—are often the most fragile and yet most universally undervalued. These qualities underpin a community's connection to heritage across the globe. The smell of incense in an old European cathedral, the sound of prayers in a mosque in Cairo, or the rhythm of artisans in Kyoto—all embody authenticity beyond the visible. Preserving these sensory and symbolic elements requires participatory engagement, cultural mapping, and a shift toward meaning-centred conservation. This dimension is not bound by East or West—it is human and universal.

In sum, the Dimensions of Authenticity presented in the Hoi An Protocols provide not only a regionally nuanced but also a globally transferable framework. They move conservation thinking beyond static material preservation toward a dynamic, context-sensitive, and community-rooted approach. This framework justifies the inclusion of architectural conservation as a vital and multidimensional process. It compels us to conserve not just the physical artefacts of culture, but also the practices, relationships, and meanings they embody—anywhere in the world.

4. Regenerative paradigm

In 1999, an overlap of the regenerative and sustainable paradigms relevant to heritage site management occurred. Further, the living heritage approach was presented by International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM) in 2005, implying the required tools for developing the community-based approach to management and conservation.

Regeneration

In a broad sense, urban regeneration is the process of making an existing urban area better in order to improve its physical, functional, economic, social, cultural, and environmental conditions. This leads to a more stable and harmonious way of life. It is the process that cities use to challenge their deficiencies, correct their missteps, and remake them. Through urban regeneration, a city can move to use its potential to make it sustainable, liveable, and humane. It is the process of revitalizing and redeveloping deteriorated or underutilized areas within cities and rejuvenating urban spaces, enhancing quality of life, and fostering sustainable development. Regeneration has the following objectives:

- Economic Revitalization: Stimulate local economies by attracting investment, creating jobs, and supporting local businesses.
- Social Improvement: Enhance living conditions, reduce social inequalities, and foster community engagement.
- Environmental Sustainability: Upgrade infrastructure to be more sustainable, incorporate green spaces, and promote eco-friendly practices.

5. Case studies

All across the globe, several initiatives have been taken for the regeneration of urban cultural landscapes, and many of them have been successful. Analysis of various case studies in diverse contexts can yield valuable lessons (Tab. 2) for the development of a regeneration framework.

Aspects	Walled city of	Edinburgh Old	El Raval District,	Porto Ribeira,
Aspects	Jaipur, Rajasthan	Town, UK	Barcelona	Portugal
Visual image				
Location and setting	Place: Planned as a trade city. Setting: Grid layout with fortified walls. Sense of Place: Pink City, Vibrant bazaars and chowks. Environmental Niches: Arid plains with astronomical orientation. Landforms and Vistas: Surrounded by Nahargarh hills. Environs: Fortifications,	Place: Medieval town on volcanic crag Setting: Crag and tail landform with castle. Sense of Place: Historic closes and streetscape. Environmental Niches: Volcanic terrain with Castle Rock. Landforms and Vistas: Views from Arthur's Seat and Calton Hill.	Place: Historic working-class neighbourhood. Setting: Dense urban fabric with narrow streets. Sense of Place: Multicultural and artistic hub. Environmental Niches: Mediterranean coastal plain. Landforms and Vistas: Urban blocks with limited open spaces.	Place: Riverside medieval urban core. Setting: Terraced housing along Douro River. Sense of Place: Historic quays and narrow lanes. Environmental Niches: Steep riverbanks with maritime influence. Landforms and Vistas: Views of Dom Luís I Bridge and river.
	temples, and	Environs: Royal	Environs: Adjacent	Environs : Wharfs, wine
	bazaars.	Mile, gardens, and	to markets and	cellars, and hillsides.
	Living Elements:	historic buildings.	immigrant zones.	Living Elements:
	Artisans, traders,	Living Elements:	Living Elements:	Residents, artisans,
	and pilgrims.	Locals, tourists, and	Street artists, activists,	and tourists.
	Dependence on	performers.	and residents.	Dependence on
	Locale: Culturally	Dependence on	Dependence on	Locale: Tied to
	and climatically	Locale: Historically	Locale: Migration-	river-based trade
	embedded.	strategic location.	driven evolution.	and fishing.

Form and Design	Spatial layout: Gridiron plan. Design: Rajput- Mughal fusion. Materials: Pink sandstone. Crafts: Jaali, frescoes. Building techniques: Lime plaster, trabeated. Engineering: Water harvesting. Stratigraphy: 18th- century layers. Linkages: Amber Fort, observatories.	Spatial layout: Medieval fishbone. Design: Gothic- Georgian blend. Materials: Stone, slate. Crafts: Stone carving. Building techniques: Load-bearing masonry. Engineering: Vaults, bridges. Stratigraphy: Medieval to Georgian. Linkages: New Town, castle.	Spatial layout: Organic medieval. Design: Eclectic, modernist. Materials: Stone, concrete. Crafts: Tile work. Building techniques: Mixed vernacular. Engineering: Basic utilities. Stratigraphy: Incremental layers. Linkages: Gothic Quarter, port.	Spatial layout: Organic riverside. Design: Baroque, vernacular. Materials: Stone, azulejos. Crafts: Tile artistry. Building techniques: Stone masonry. Engineering: Retaining walls. Stratigraphy: Romanesque to modern. Linkages: Douro Valley, bridges.
Use and Function	Use(s): Trade, Worship, Residence. User(s): Artisans, Traders, Pilgrims. Associations: Royalty, Astronomy, Crafts. Changes Over Time: Tourism Expansion. Spatial Distribution: Zoned Chowkris. Impacts of Use: Infrastructure Strain. Environmental Response: Climate- Responsive Design. Historical Response: Planned Capital City.	Use(s): Civic, Residential, Tourism. User(s): Locals, Tourists, Artists. Associations: Enlightenment, Reformation. Changes Over Time: Adaptive Reuse. Spatial Distribution: Medieval Spine. Impacts of Use: Over tourism. Environmental Response: Topography Utilization. Historical Response: Medieval Origins.	Use(s): Residential, Cultural, and Commercial. User(s): Migrants, Artists, Activists. Associations: Multiculturalism, Industry. Changes Over Time: Gentrification. Spatial Distribution: Mixed-Use Blocks. Impacts of Use: Community Displacement. Environmental Response: Dense Urban Fabric. Historical Response: Industrial Heritage.	Use(s): Residential, Tourism, Commerce. User(s): Locals, Tourists, Traders. Associations: Maritime Trade. Changes Over Time: Tourism Development Spatial Distribution: Riverfront Axis. Impacts of Use: Gentrification. Environmental Response: Riverbank Adaptation. Historical Response: Trade Hub.

Immaterial Qualities Reason of Decay	Artistic Expression: Jewellery, Frescoes & block prints. Values: Craftsmanship & cosmopolitanism Spirit: Vibrant & sacred. Emotional Impact: Majestic & symbolic. Religious Context: Hindu-Muslim harmony. Historical Associations: Astronomy & trade. Sounds, Smells, Tastes: Spices & temple bells. Creative Process: Guild-based artistry. Overcrowding, haphazard development, and lack of infrastructure	Artistic Expression: Literary & storytelling. Values: Enlightenment & resilience. Spirit: Layered & intellectual. Emotional Impact: Solemn & historic. Religious Context: Reformation heritage. Historical Associations: Royal & civic pride. Sounds, Smells, Tastes: Bagpipes & ale. Creative Process: Oral traditions. Old Town experienced significant socio- economic decline due to urban depopulation, neglect of historic infrastructure,	Artistic Expression: Street art & murals. Values: Multiculturalism & activism. Spirit: Gritty & expressive. Emotional Impact: Dynamic & raw. Religious Context: Secular diversity. Historical Associations: Migration & resistance. Sounds, Smells, Tastes: Global cuisines & rhythms. Creative Process: Grassroots innovation. Economic decline, poor housing conditions, crime, and social marginalization of	Artistic Expression: Azulejos & fado. Values: Tradition & hospitality. Spirit: Melancholic & nostalgic. Emotional Impact: Intimate & soulful. Religious Context: Catholic processions. Historical Associations: Maritime & wine trade. Sounds, Smells, Tastes: Sea breeze & grilled sardines. Creative Process: Oral storytelling. Industrial relocation, economic stagnation, depopulation, and physical	
	maintenance led to deterioration of the historic urban core.	infrastructure, post-war planning decisions, and insufficient investment.	marginalization of residents.	and physical deterioration of historic structures.	
	Regeneration Efforts				
Primary focus	Heritage preservation for tourism, restoration of architectural elements, and maintaining the city's identity as a living culture.	Primary focus of regeneration was to balance heritage preservation with urban revitalization by enhancing the built environment, encouraging cultural activity, and fostering socio-economic regeneration without compromising the area's historical character.	Cultural rejuvenation, crime reduction, and economic upliftment through cultural tourism and creative industries.	Primary focus was to preserve the historic character and cultural identity of Ribeira while improving the living conditions of residents and promoting sustainable economic revitalization, through managed tourism and heritage-based urban development.	

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Lessons learned	Need for holistic planning to balance tourism and local needs. Sustaining cultural identity while modernizing.	Heritage regeneration requires a holistic approach that integrates physical restoration, cultural vitality, and community empowerment.	Cultural regeneration can revitalize neglected areas. Need for policies to prevent gentrification and displacement.	Holistic Planning, Community involvement, Tourism Needs Proactive Management, Continuous investments are required.
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Tab. 2. Case studies on urban cultural landscape

6. Culture for sustainable urban development

Culture plays a crucial role in making cities not only liveable but also vibrant, innovative, and sustainable. Throughout history, iconic landmarks, cherished heritage, and enduring traditions reflect the intrinsic link between urban development and cultural expressions. Without culture, cities lose their soul, becoming mere assemblies of concrete and steel, vulnerable to social alienation and disintegration. Culture breathes life into urban spaces, fostering identity, resilience, and connection.

In 2015, UNESCO created a conceptual framework to highlight the role of culture in promoting sustainable urban development within the 2030 Agenda for Sustainable Development. They did this because they knew that protecting cultural heritage and promoting the variety of cultural expressions were important ways to make cities more sustainable. It emphasizes the integration of cultural dimensions across urban development, aligning with three core themes:

- People: Social inclusion, identity, and cultural diversity.
- Environment: Resilience, sustainable resource use, and ecological systems.
- Policies: Governance models for cultural and urban sustainability.

Thematic Indicators for Culture in the 2030 Agenda (2019)

The Thematic Indicators put the ideas from the conceptual framework of 2016 into action. They give us a way to measure progress and hold people responsible for the cultural aspects of sustainable development. It is to measure and monitor the contribution of culture to achieving the Sustainable Development Goals (SDGs). It provides a framework of 22 thematic indicators structured around four dimensions of culture:

- Environment and Resilience
- Prosperity and Livelihoods
- Knowledge and Skills
- Inclusion and Participation

7. Challenges and gaps

Urban cultural landscapes embody the interplay of tangible and intangible heritage, contributing to a city's identity and socio-cultural fabric. Urban cultural regeneration has shifted from focusing on aesthetics to a sustainable approach, integrating environmental, social, and cultural dimensions. Several efforts have been done at various places; however, multiple challenges persist.

7.1. Architectural Conservation Challenges

The conservation of historic architecture within urban cultural landscapes presents multifaceted challenges. These challenges stem from the inherent vulnerabilities of aging structures, evolving urban dynamics, and the complexities of integrating traditional practices with contemporary needs. This section delves into the primary challenges hindering effective architectural conservation.

Structural Deterioration and Material Decay

Historic buildings are inherently susceptible to structural deterioration due to prolonged exposure to environmental elements and the natural aging of materials. Factors such as moisture infiltration, temperature fluctuations, biological growth, and pollution contribute to the weakening of structural components, leading to issues like cracks, erosion, and material loss. Inadequate maintenance exacerbates these problems, as neglect allows minor defects to evolve into significant structural failures. Furthermore, the use of incompatible modern materials and techniques in restoration efforts can accelerate decay. For instance, applying impermeable cement-based mortars to historic masonry can trap moisture, leading to accelerated deterioration.

Regular maintenance is crucial for the longevity of historic structures. However, many heritage buildings suffer from neglect due to limited resources or lack of awareness, accelerating deterioration and increasing restoration costs.

Documentation and Research Deficiencies

Effective conservation relies on comprehensive documentation of a building's history, architecture, and previous interventions. However, many heritage structures lack detailed records, hindering accurate restoration and risking the loss of significant architectural features. The decline in the study and understanding of traditional construction methods further impedes the ability to restore buildings authentically. Reviving and documenting indigenous building practices are essential for informed conservation efforts.

Shortage of Skilled Craftsmanship

The specialized skills required for traditional construction and restoration are diminishing. As experienced artisans retire, there is a growing gap in the workforce capable of executing authentic conservation work. Educational institutions often lack programs focused on traditional building techniques, resulting in a new generation of professionals unfamiliar with heritage conservation practices.

Regulatory and Policy Limitations

Many regions lack comprehensive policies that prioritize heritage conservation, leading to inconsistent enforcement and protection of historic structures. Complex approval processes and overlapping jurisdictions can delay conservation projects, discouraging stakeholders from undertaking necessary restoration work. Additionally, without financial incentives or support, property owners may be reluctant to invest in the preservation of historic buildings, opting instead for demolition or unsympathetic alterations.

7.2. Socio-Economic Pressures

Urban cultural heritage sites are increasingly subjected to a range of socio-economic pressures that challenge their preservation and sustainability. These pressures stem from rapid urbanization, economic development priorities, and shifting demographic patterns, all of which can undermine the integrity and continuity of heritage assets.

Urban Development and Gentrification

The drive for modernization often places heritage sites at risk, as new developments prioritize economic gains over cultural preservation. Gentrification, in particular, leads to the displacement of long-standing communities and alters the social fabric of historic neighbourhoods. As property values rise, original residents may be forced to relocate, resulting in the loss of intangible cultural practices and community identity that are integral to the heritage of the area.

Economic Constraints and Funding Limitations

Financial limitations are a significant barrier to effective heritage conservation. Public funding for preservation projects is often limited, and private investment may favour developments with immediate economic returns over long-term cultural value. This lack of financial support can lead to deferred maintenance, deterioration of heritage structures, and, ultimately, their loss. Innovative financing mechanisms, such as public-private partnerships and heritage-based tourism initiatives, are essential to bridge the funding gap and ensure sustainable conservation efforts.

Tourism and Commercialization

While tourism can provide economic benefits and raise awareness of cultural heritage, it can also lead to over-commercialization and commodification of cultural assets. The influx of tourists may strain local infrastructure, disrupt community life, and lead to alterations of heritage sites to cater to tourist expectations, potentially compromising their authenticity. Balancing tourism development with heritage conservation requires careful planning and community involvement to maintain the cultural significance of heritage sites.

Demographic Changes and Social Dynamics

Shifts in population dynamics, such as urban migration and changing socio-economic profiles, can impact the preservation of cultural heritage. New residents may lack a connection to the historical significance of heritage sites, leading to apathy or neglect. Additionally, the erosion of traditional practices and community structures can result in the loss of intangible cultural heritage. Engaging diverse communities in heritage conservation efforts is crucial to fostering a sense of ownership and ensuring the transmission of cultural values across generations.

7.3. Environmental and Climate Challenges

Climate change poses significant threats to heritage structures. Rising temperatures, increased humidity, and extreme weather events accelerate material degradation and structural instability. Urban pollution contributes to the chemical deterioration of building materials, especially stone and metal, leading to the loss of architectural details. Natural disasters such as earthquakes and floods can cause irreparable damage to heritage sites, highlighting the need for disaster preparedness in conservation planning.

7.4. Community Engagement and Awareness

Public indifference or lack of awareness about the value of heritage conservation can lead to neglect and vandalism of historic sites. Effective conservation requires active participation from local communities. However, there is often a disconnect between conservation authorities and residents, leading to a lack of collaborative efforts. There is a need for educational programs that emphasize the importance of heritage conservation, targeting both the public and professionals in the field.

7.5. Policy and Regulatory Challenges

The effectiveness of architectural conservation is heavily dependent on robust policy frameworks and regulatory mechanisms. However, many regions grapple with outdated or fragmented policies that fail to address the nuanced needs of heritage preservation. In some cases, existing regulations may lack clarity, leading to inconsistent enforcement and loopholes that can be exploited, resulting in unauthorized alterations or demolitions of historic buildings.

Additionally, the integration of conservation policies into broader urban planning strategies is often inadequate. This disconnect can result in development projects that overlook or undermine heritage considerations, leading to the loss of cultural assets. Furthermore, the absence of community involvement in policy formulation can lead to regulations that do not reflect local values or priorities, diminishing public support for conservation efforts.

To address these challenges, it is essential to develop comprehensive, context-sensitive policies that are regularly updated to reflect evolving conservation principles and urban dynamics. Strengthening institutional capacities and fostering inter-agency collaboration can also enhance the implementation and enforcement of conservation regulations.

This identifies the need for a comprehensive framework for regeneration that targets the above challenges.

8. Results: Regeneration framework

The recommended regeneration approach consists of multiple interconnected components. Three of them are guiding principles, regeneration processes, and sustaining regeneration (Fig. 1).

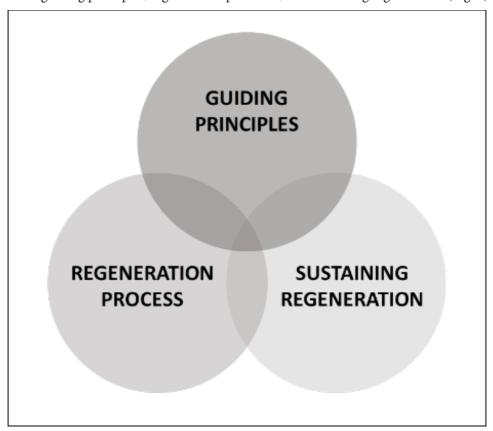


Fig. 1. Components of regeneration framework

A. Guiding principles

The value and characteristics of the cultural landscape should directly inform the approach to regeneration. The regeneration framework offers this set of principles as a foundation for its implementation. These six principles embody many of the fundamental ideas and approaches that should underpin strategies and inform specific activities for the regeneration of cultural landscapes. They are useful during the initial stages of regeneration as well as on- and adaptive regeneration over time.

- Principle 1: Architectural Conservation and Authenticity- To protect and restore architectural integrity through the use of traditional methods, compatible materials, and adaptive reuse strategies to maintain the authenticity and historical significance
- Principle 2: The Community-Centred Approach involves individuals living in and connected to the cultural landscape as key stakeholders in the regeneration process.

- **Principle 3:** Participatory and Inclusive Governance—Effective regeneration relies on transparency and inclusivity. Stakeholders should engage in discussions and agreements to make decisions.
- **Principle 4:** Harmonizing People and Environment—The significance of a cultural landscape lies in the dynamic relationship between people and their environment, with regeneration efforts best directed toward fostering this connection.
- **Principle 5:** Adapting to Change—The goal of regeneration should be to carefully guide changes to preserve the cultural landscape's values.
- **Principle 6:** Sustainability and Resilience—Successful regeneration should support long-term sustainability and resilience for both landscapes and communities.

B. Regeneration process

Viewing the entire process as a cycle is possible. This is because needs are evolving continuously, so regeneration has to adapt to rapid urbanization. The process begins by taking into account the three themes that UNESCO has suggested for incorporating culture into sustainable development: people, environment, and policies (Fig 2). It includes 4 stages.

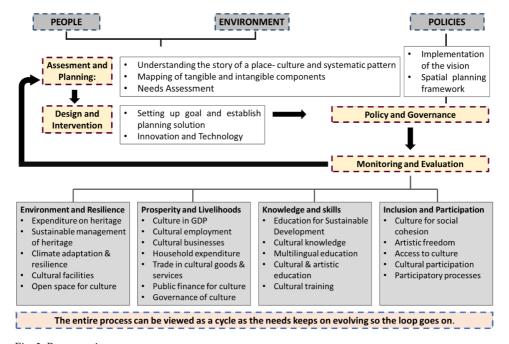


Fig. 2. Regeneration process

• Stage 1(A): Assessment - Cultural landscapes are the result of the interaction of people and the environment, so the assessment starts from there. Assessment should be done considering the dimensions of authenticity

Concept of Layering- It involves analysing the various historical, cultural, and functional changes that a site has undergone over time. This concept helps urban planners and conservationists identify how past uses and cultural meanings of a site coexist or overlap, contributing to its current identity.

Value Identification: Evaluates a site based on its cultural, historical, social, and economic values. Different stakeholders (local communities, historians, tourists, and policymakers) may assign different values to a site.

Architectural assessment: Include detailed assessment of structural conditions and historical authenticity of buildings. Identify architectural features that are vital for preservation and authenticity.

• **Stage 1(B): Planning:** After assessment comes the planning for the cultural landscapes.

Interdisciplinary approach- Combine expertise from diverse fields (urban planning, conservation, sociology, environmental sciences, technology) to create holistic approaches to maintain architectural integrity and urban sustainability. Provide tools for assessing the social, environmental, and economic impacts of cultural heritage initiative.

Urban cultural landscape revitalization should not only preserve historic significance but also harmoniously integrate it with contemporary urban life.

• Stage 2: Design and Intervention: After assessment comes the planning for the cultural landscapes.

Participatory Approach: It involves engaging local communities, stakeholders, and various experts in the process of restoring, managing, and sustaining cultural landscapes. This approach emphasizes collaboration, inclusivity, and the integration of traditional knowledge with contemporary practices to ensure sensitive restoration practices, focusing on original design elements, façade integrity, and historically accurate materials. Participants can share their vision for the landscape and collectively design solutions through collaborative sessions. Involving the community in the design process leads to ease of implementation.

• Stage 3: Policy and Governance- The third theme, policy frameworks and governance structures are crucial in the regeneration of urban cultural landscapes, particularly when prioritizing architectural conservation. Robust, context-sensitive policies should clearly define standards for preserving architectural authenticity and integrity, mandating the use of historically accurate materials and traditional construction methods. To implement these frameworks effectively, it is essential to establish specialized governance bodies or committees that include conservation architects, urban planners, local authorities, heritage specialists, and community representatives. This integrated governance model ensures decisions are inclusive, transparent, and aligned with heritage conservation objectives.

Moreover, policy interventions should encompass regulatory incentives, such as tax benefits and conservation grants, to encourage private-sector participation in restoration projects. Clear, enforceable guidelines must be developed to prevent inappropriate alterations and ensure that adaptive reuse initiatives do not compromise architectural integrity. Additionally, policies should facilitate community participation by promoting local awareness and understanding of architectural heritage, thus securing public support and active involvement in the preservation of urban cultural landscapes.

• Stage 4: Monitoring and Evaluation- Continuous monitoring and evaluation are critical components of a successful regeneration framework, especially concerning architectural conservation. Establishing robust evaluation protocols ensures that conservation efforts maintain the authenticity and structural integrity of heritage buildings. Regular inspections and condition assessments conducted by qualified conservation experts and heritage bodies should be systematically integrated into regeneration processes. This systematic approach allows for timely identification of risks and implementation of necessary corrective measures.

Evaluation criteria must specifically address architectural authenticity, the effectiveness of traditional construction techniques, and the appropriateness of adaptive reuse solutions. Performance indicators should include metrics such as the condition of building materials, authenticity of restored structures, level of community involvement in conservation activities, and the economic viability of heritage-based interventions. Incorporating community feedback through regular consultations and participatory evaluations further enhances accountability and effectiveness, ensuring that regeneration outcomes align with community expectations and heritage preservation standards.

C. Sustaining Regeneration

This focuses on governance capacity, funding strategies, and capacity building for sustaining the regeneration. To sustain architectural conservation efforts within urban cultural landscapes, comprehensive long-term strategies are imperative. Financial sustainability can be secured through diverse funding mechanisms, including heritage-specific public-private partnerships, dedicated government funding, international heritage grants, and incentivized private-sector investments. Establishing dedicated heritage conservation funds can provide consistent resources necessary for ongoing restoration and maintenance activities.

Capacity building is equally essential for sustainable conservation practices. Investment in educational initiatives and training programs focused on traditional construction methods and conservation techniques can address the existing gap in skilled artisanship. Collaborations with universities, vocational training institutes, and professional organizations can enhance technical expertise and cultivate a new generation of skilled professionals committed to architectural conservation.

Moreover, establishing clear governance structures that allow adaptive policies to respond to emerging challenges—such as environmental threats or changing socio-economic contexts—is essential. Ensuring sustained community engagement through education, awareness

programs, and transparent participatory governance strengthens local stewardship of heritage resources. Ultimately, a sustained regeneration framework integrates financial stability, skilled capacity development, responsive governance, and community ownership to ensure the lasting preservation and appreciation of urban architectural heritage.

9. Conclusions

The regeneration of urban cultural landscapes is an essential process that harmonizes historical preservation with contemporary urban needs, fostering sustainable development. This study shows that cultural landscapes are important parts of urban identity that are formed by the interaction of real and imagined factors. Community-centred approaches and public-private partnerships have been shown to work in the past through successful case studies. However, problems like fragmented governance, inadequate funding, and the underrepresentation of intangible heritage still exist.

To overcome these gaps, a holistic regeneration framework is proposed, emphasizing participatory governance, adaptive change management, and sustainability. Integrating cultural dimensions into urban planning not only preserves heritage but also enhances social cohesion, economic vitality, and environmental resilience. Moving forward, embracing broad policies, building up local abilities and long-term funding systems will help urban cultural landscapes stay alive, real, and an important part of city life.

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Author contributions

Monisha Jain played a key role in the conceptualization, methodology, formal analysis, and preparation of the original draft. She was tasked with gathering data, conducting investigations, and creating visual representations. Prafulla Parlewar contributed by overseeing, validating, and engaging in the writing, review, and editing process. All contributors reviewed and endorsed the final manuscript.

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