INGRAINED REALMS: EXPLORING THE INTERSECTION OF CULTURAL LANDSCAPES AND ARCHITECTURE

AT HAMPI AND TAJ MAHAL

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Abstract: Heritage refers to the legacy of physical artifacts (tangible heritage) and intangible attributes (intangible heritage) passed down through generations. Tangible heritage includes buildings, monuments, landscapes, and objects, while intangible heritage encompasses traditions, languages, knowledge, cultural practices, and customs. Heritage represents the collective identity and history of a society, serving as a means to preserve and transmit cultural, social, and historical values from the past to future generations. The aim of this research paper is to critically analyze the conservation strategies adopted in two different cultural sites located in two different parts of the India, one in metropolitan city and other in a village. In this paper, two cultural sites, Taj Mahal at Agra, India and Group of Monuments at Hampi, India, have been selected based on their Outstanding Universal Values. The main objective for selecting these two sites is that both are cultural sites, both have a strong historical and architectural background, and are inscribed in World Heritage Sites.

Key Terms: Cultural heritage, UNESCO, Monuments, Taj Mahal, Agra, Outstanding Universal Values

1. INTRODUCTION

The study of cultural landscapes and architectural identity offers a unique lens through which we can understand the intricate relationship between people, place, and built environments. In shaping human experience, architecture transcends its functional role, becoming a vessel of cultural expression and societal values. Cultural landscapes, as a physical manifestation of this relationship, serve as living records of a community's evolution, echoing the collective memory and identity of its inhabitants.

This research paper, titled *Ingrained Realms: Exploring the Intersection of Cultural Landscapes and Architecture* seeks to explore how architecture not only reflects but also shapes socio-cultural values, traditions, and the collective ethos of a society. Through a multidisciplinary approach, the study delves into the symbiotic relationship between culture and architecture,

focusing on how landscapes become symbolic of regional identity, heritage, and historical continuity. By examining studies from various culture and time periods, this paper aims to shed light on how architecture serves as both a product and a producer of culture, revealing the profound connections between space, society, and identity.

Definition of key terms

Architecture: Architecture is both the art and science of designing and constructing buildings and other physical structures. It involves the thoughtful integration of aesthetics, function, and technology to create spaces that are functional, safe, and pleasing. Architecture reflects cultural, social, environmental, and technological influences, often serving as a medium to express societal values and individual creativity. It spans from small-scale projects like homes to large public structures like museums, schools, and urban developments.

Culture: Culture refers to the set of shared beliefs, values, customs, behaviors, and artifacts that characterize a group or society. It encompasses everything from language, religion, and traditions to social habits, art, and collective knowledge passed down through generations. Culture shapes how individuals perceive the world, interact with others,
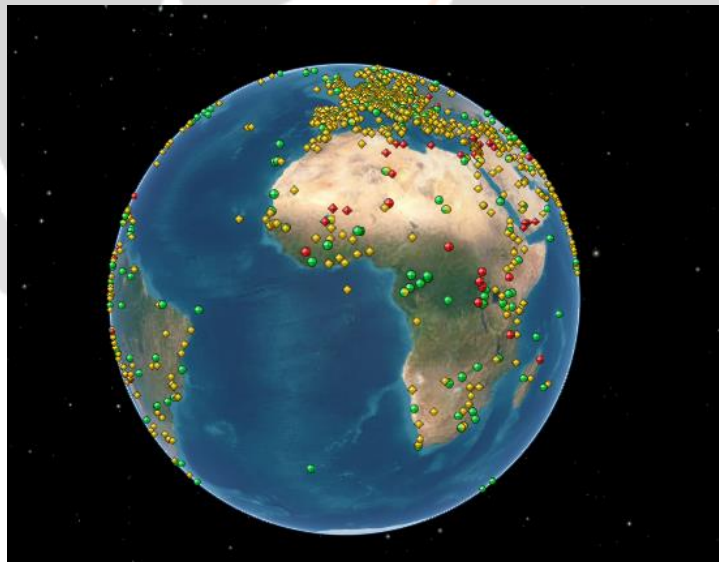
and understand their place within their community. It is both dynamic and adaptive, evolving over time while maintaining core elements that provide a sense of identity and continuity.

2.LITERATURE REVIEW

The World Heritage Convention, established by UNESCO, outlines the criteria for including natural and cultural sites on the World Heritage List. The process of nominating a site for this list involves five key stages: the tentative list, the nomination file, advisory body evaluations, review by the World Heritage Committee, and meeting the selection criteria. Each state party must create an inventory of its significant natural and cultural sites, then submit a report for potential inscription. Once a tentative list is developed, the state can plan when to submit the nomination file, with guidance and support from the World Heritage Centre. This includes preparing the necessary documentation and maps. The nominated property is then assessed by two independent advisory bodies: the International Council on Monuments and Sites (ICOMOS) and the International Union for Conservation of Nature (IUCN), followed by a third advisory body, the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM). ICCROM advises the committee on the conservation of cultural sites and training programs.

The final decision on which sites are added to the World Heritage List is made by the World Heritage Committee. To be listed, a site must demonstrate Outstanding Universal Value and meet at least one of the ten selection criteria. These criteria are divided into two categories: cultural - (i), (ii), (iii), (iv), (v), (vi) and natural – (vii), (viii), (ix), (x), as detailed in the

Operational Guidelines for the Implementation of the World Heritage Convention. UNESCO classifies World Heritage Sites into three types: cultural, natural, and mixed. As of July 2024, there are 1,223 World Heritage Sites across 168 countries. These include 952 cultural sites, 231 natural sites, and 40 mixed properties. India has 42 World Heritage Sites. Of these, 34 are cultural, seven are natural, and one, Khangchendzonga National Park, is of mixed type.
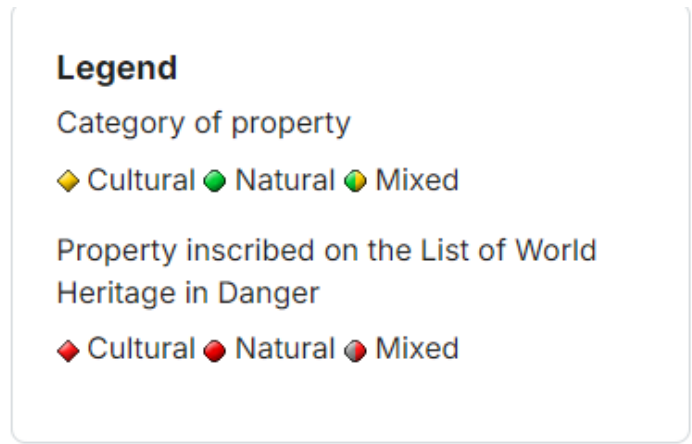
Legend

Category of property

◇ Cultural ● Natural ◐ Mixed

Property inscribed on the List of World
Heritage in Danger

◆ Cultural ● Natural ◐ Mixed

Figure 1 Location of World Heritage Sites across 168 countries

Source: UNESCO World Heritage Centre – World Heritage List

Conservation techniques like preservation, consolidation, restoration, reconstruction, reproduction and rehabilitation are all essential components of the conservation process. Their goal is to safeguard a structure's historical, architectural, aesthetic, and cultural importance.

Several parameters have been outlined for the analysis of two world heritage sites, including their history, architectural style, materials, UNESCO criteria, outstanding universal value, potential threats, causes of deterioration, conservation methods, and tourist influx.

OBJECTIVES

1. To conduct a literature review from secondary sources and determine key parameters for a critical analysis of two world heritage sites.

    2. To select two world heritage sites for critical analysis, one from Agra, a city site from India and the other from Hampi , a village site.

    3. To examine the conservation strategies and policies implemented for the two selected world heritage sites.

    4. To explore the significance of architecture in Indian culture by examining how architectural practices reflect the socio-cultural, religious, and historical values of Indian society.

    3. METHODOLOGY

    This research paper relies on secondary data collection, focusing on the identification and analysis of two World Heritage Sites. These sites have been evaluated using various parameters, with a detailed examination of the conservation techniques employed at each. A comparative analysis has been conducted between the two sites, and based on this assessment, recommendations and conclusions have been provided.

    Objective 1 – **To conduct a literature review from secondary sources and determine key parameters for a critical analysis of two world heritage sites**.

- Secondary data collection
- Literature Review

- Identified Parameters: History, Architectural style, Causes of decay, Potential threats, Materials used, Criteria as per UNESCO, Outstanding Universal Value (OUV), Tourist influx, Conservation approach

Objective 2 – **To identify two world heritage sites for critical analysis one is TajMahal   from Agra city, India and other is Group of Monuments at Hampi, from Hampi village itself, India.**

- World Heritage Convention
- Two sites have been identified TajMahal from Agra city, India and Group of monuments at Hampi, from Hampi village, India.

Objective 3 – **To identify conservation strategies and policies used for two identified World Heritage Sites.**

- Conservation approaches
- Restoration method
- Policies implemented
- Results and Discussion

4. FOCUS OF THE STUDY

Location of Two World Heritage Sites selected for study area

Figure 2 Source: Taj Mahal(left) – UNESCO World Heritage Centre

Figure 3 Source: Group of Monuments at Hampi(right) – UNESCO World Heritage Centre

Two cultural World Heritage Sites have been chosen for analysis and comparison. One is Taj Mahal from Agra city, India and the other is Group of monuments at Hampi, which   is a village in India.
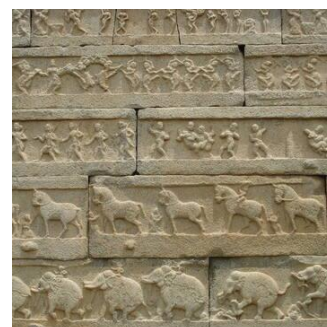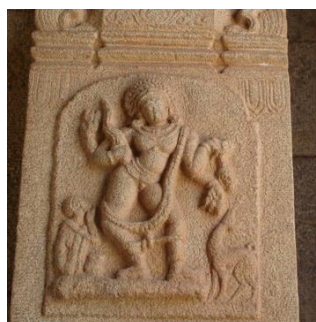
Figure 4 Group of Monuments at Hampi

Source: Group of Monuments at Hampi – Gallery - UNESCO World Heritage Centre

The austere, grandiose site of Hampi was the last capital of the last great Hindu Kingdom of Vijayanagar. Its fabulously rich princes built Dravidian temples and palaces which won the admiration of travellers between the 14th and 16th centuries. The vitthla temple is the most exquisitely ornate structure on the site and represents the culmination of Vijayanagara temple and Utsava Mandapa within a cloistered enclosure pierced with three entrance Gopurams.

Figure 5 Taj Mahal

Source: Taj Mahal – Gallery - UNESCO World Heritage Centre

Taj Mahal is an immense mausoleum of white marble, built in Agra between 1631 and 1648 by order of the Mughal emperor Shah Jahan in memory of his favourite wife, Mumtaz Mahal the Taj Mahal is the jewel of Muslim art in India and one of the universally admired masterpieces of the world's heritage. The Taj Mahal is considered to be the greatest architectural achievement in the whole range of Indo – Islamic architecture.

5. A CRITICAL EXAMINATION OF THE RESEARCH DOMAINS

The two sites that are selected for critical analysis have been done on various parameters.

5.1 HISTORY

Hampi, also known as Pampa Kshetra, Kishkindha Kshetra, and Bhaskara Kshetra, derives its names from the sacred Tungabhadra River, once called Pampa. According to mythology, Pampa was the daughter of Brahma, later married to Shiva, and it was in this region that the ancient city of Hampi was established. The name "Hampi" itself is a variation of "Hampe", a word from the Kannada language. Today, Hampi is also referred to as Vijayanagara, named after the powerful dynasty that once ruled the area. As you explore the remains of its grand forts, palaces, and gateways, the intricate architecture offers a glimpse into the grandeur of the Vijayanagara Empire. These monuments stand as silent witnesses to the once – thriving and wealthy kingdom, which reached its peak in the 14th century before being destroyed by Mughal invasions.

Hampi's history, however, stretches back much further, to the Neolithic and Chalcolithic periods of the 2nd and 3rd centuries. This has been confirmed by the discovery of ceramic artifacts from those times. According to popular folklore, the foundation of Vijayanagara was laid when two local chieftains, Hakka and Bukka, saw an extraordinary sight during a hunting trip. They reported it to their guru, Vidyaranya, describing how a hare, being chased by their hound, suddenly turned and bravely pursued the dog instead. The guru, interpreting this as a sign of the land's special significance, advised them to move their capital there. Thus began the rise of empire that, over two centuries and under the rule of four dynasties, flourished as one of the wealthiest in history. Hampi, the City of Victory, became a beacon of prosperity and architectural brilliance.

The Taj Mahal is an ivory – white marble mausoleum on the south bank of the Yamuna river in the Indian city of Agra. It was commissioned in 1632 by the Mughal emperor, Shah Jahan to the house of tomb of his favourite wife,

Mumtaz Mahal. The tomb is the centerpiece of a 17 – hectare complex, which includes a mosque and a guest house, and is set in formal gardens bounded on three sides by a crenellated wall. Construction of the mausoleum was essentially completed in 1643 but work continued on other phases of the project for another 10 years. The Taj Mahal complex is believed to have been completed in its entirety in 1653 at a cost estimated at the time to be around 32 million rupees, which in 2015 would be approximately 52.8 billion rupees. The construction project employed some 20,000 artisans under the guidance of a board of architects led by the court architect to the emperor, Ustad Ahmad Lahauri.

5.2 TOURIST INFLUX

S. No.	Name of the Monuments	2019-2020		2020-2021		% Growth 2020-2021/2019-2020	
		Domestic	Foreign	Domestic	Foreign	Domestic	Foreign
1.	Taj Mahal	4429710	645415	1259892	9034	-71.56	-98.60
2.	Group of Monuments, Hampi	587238	27006	273456	627	-53.43	-97.68

S. No.	Name of the Monuments	2021-2022		2022-2023		% Growth 2022-2023/2021-2022	
		Domestic	Foreign	Domestic	Foreign	Domestic	Foreign
1.	Taj Mahal	3294611	38922	5052712	396900	53.36	919.73
2.	Group of Monuments, Hampi	425950	1244	809741	15890	90.10	1177.33

Figure 6 Tourist footfall of Study Areas

Source: India tourism statistics report 2020, 2021, 2022, 2023

5.3 ARCHITECTURAL STYLE

Taj Mahal represents Mughal architecture whereas Group of Monuments at Hampi represents Dravidian architecture, with some elements of Hoysala and Indo – Islamic styles.

The Taj Mahal complex uses symmetrical constructions with various shapes and symbols. The mausoleum is made of white marble inlaid with semi – precious stones, while other buildings in the complex are made of red sandstone. The entire complex sits on a platform that's 300 meters long and 8.7 meters high, built with patterns of light and dark colored sandstone. The Taj Mahal features concave and convex shapes. The levels of the complex gradually descend in steps from the Taj Ganji towards the river.

The architecture in Hampi, India is primarily Dravidian, with some elements of Hoysala and Indo – Islamic styles. **Dravidian –** The dominant style, with roots in the Hindu arts and architecture of the Deccan region in the second half of the 1st millennium. The Virupaksha Temple is a notable examples of Dravidian architecture. **Hoysala –** Some elements of the Hoysala style are visible in the pillars of the Ramachandra temple and the ceilings of some of the Virupaksha temple complex. **Indo – Islamic –** Some monuments, such as the Queen's bath and Elephant stables, show an Indo – Islamic style.

5.4 MATERIALS USED

The building material used in Taj Mahal is brick – in – lime mortar whereas most of the structures at Hampi are constructed from local granite, burnt bricks and lime mortar.

The Taj Mahal built with brick – in – lime mortar veneered with red sandstone and marble and inlay work of precious or semi – precious stone. The mosque and the guest house in the Taj Mahal complex are built of red standstone in contrast to the marble tomb in the centre.

Group of Monuments at Hampi, mostly used local granite, burnt bricks and lime mortar. The stone masonry and lantern roofed post and lintel system were the most favoured construction technique. The massive fortification walls have irregular cut size stones with paper joints by filling the core with rubble masonry without any binding material. The gopuras over the entrances and the sanctum proper have been constructed with stone and brick.

5.5 OUTSTANDING UNIVERSAL VALUE (OUV)

Outstanding Universal Value refers to the exceptional cultural or natural importance that goes beyond national borders and holds universal relevance for all humanity, both now and in the future. The three 'pillars' which comprised OUV are: meeting the criteria; integrity and authencity; and protection and management.

MEETING THE CRITERIA

To be listed as a World Heritage Site, a location must possess Outstanding Universal Value and meet at least one of the ten selection criteria outlined in the Operational Guidelines for the implementation of the World Heritage Convention. These guidelines serve as the primary tool for applying the convention, and the committee regularly updates the standards. The criteria are divided into six cultural and four natural categories. Cultural criteria include (i), (ii), (iii), (iv), (v), (vi), while natural criteria include (vii), (viii), (ix), (x). Taj Mahal comes under criteria (i) whereas Group of Monuments at Hampi comes under criteria (i), (iii), (iv)

According to criterion (i), a World Heritage Site must exemplify an extraordinary achievement of human creative brilliance.

Criterion (ii), requires the site to reflect a significant exchange of human values, spanning a period of time or within a specific cultural region, showcasing advancements in architecture, technology, monumental art, or landscape design.

Criterion (iii), calla for the site to provide a unique or remarkable representation of a cultural tradition or civilization, whether still existing or long gone.

Criterion (iv), highlights the need for the site to serve as an outstanding example of a building, architectural or technological complex, or landscape that demonstrates as an important stage in human history.

INTEGRITY AND AUTHENTICITY

GROUP OF MONUMENTS AT HAMPI

Integrity of Group of Monuments at Hampi, is upheld by its well – preserved monuments, sophisticated architectural manifestations, agricultural activities, and religious and social expressions. However, it faces challenges from development pressures, land use changes, and encroachments, particularly increased commercial agriculture and infrastructure expansions like bypass roads and modern electrification, which could affect the site's landscapes and physical stability. Regulating residential and visitor – oriented constructions is essential to preserve its integrity. In terms of authenticity, the strategic location, natural resources, and original geographic setting are maintained, with the Tungabhadra River and boulders still integral to the landscape.

The architectural and archaeological elements retain their form and function, showcasing the integrity of vijayanagara builders. While some traditions have been lost due to the battle of Talikota and modernization, religious rituals, temple worship, and pilgrimages continue. However, modern developments , such as shops and roads, have impacted the site's setting, particularly around the Virupaksha temple, and must be managed sensitively to balance preservation with contemporary use.

TAJ MAHAL

The Taj Mahal complex, including the tomb, mosque, guest house, and main gate, has maintained its integrity and authenticity through careful monitoring and conservation efforts. Structural stability, foundation strength, and the

vertically of minarets are regularly assessed, while an air control monitoring station manages atmospheric pollutants to prevent deterioration. Although repairs have been conducted since the British period, the original qualities of the structures remain intact. Future developments, particularly tourist facilities, must ensure the functional and visual integrity of the site, especially in relation to Agra Fort, while adhering to conservation guidelines that preserve its form and design.

PROTECTION AND MANAGEMENT

GROUP OF MONUMENTS AT HAMPI – The protection and management of Hampi's World Heritage Area is governed by several legal frameworks, including the AMASR Act, 1958, its 2010 amendment, and the Karnataka Ancient Monuments and Archaeological Sites and Remains Act, 1961. A new draft, the Hampi World Heritage Area Management Authority Act (HWHAMA) of 2001, has also been introduced to oversee the 4187.24 hectares of the heritage site.

The Archaeological Survey of India (ASI), the Government of India, and the Government of Karnataka share responsibilities for managing 56 Nationally Protected Monuments and the surrounding areas. The ASI has a site office at Kamalapuram and coordinates with UNESCO, state authorities, and local governments through its offices in Hampi, Bangalore, and New Delhi.

HWHAMA, with its headquarters in Mysore and local offices in Hampi, is the primary authority overseeing all heritage – related activities. Other agencies, including the Hampi Development Authority (HUDA), district authorities, and local governments, manage different aspects of the cultural landscape and living traditions.

The management framework emphaisizes heritage preservation and economic upliftment. Integrated management plans, such as the Master Plan, Conservation Plan, Risk Preparedness Plan, and Public Use Plan, are in place to ensure the sustainable development of the community and minimize risks from natural and human – made disasters.

Long – term goals include capacity building, systematic coordination, participatory actions, and securing sustained funding for conservation and management projects. Regular updates to manage tools and plans are essential to safeguarding the property's outstanding universal value and ensuring the sustainability of the management system.

TAJ MAHAL – India ensures the legal protection of monuments and controls over regulated areas surrounding them through various legislative frameworks, including the Ancient Monument and Archaeological Sites and Remains Act of 1958, its 1959 Rules, and the Ancient Monuments and Archaeological Sites and Remains (Amendment and Validation). These laws provide comprehensive governance over the monuments and their buffer Zones, while additional laws help protect these sites from surrounding development activities. A designated area of 10,400 square kilometers around the Taj Mahal, known as the Taj Trapezium Zone (TTZ), has been established to safeguard the monument from pollution. In December 1996, the Supreme Court of India ruled that industries within the TTZ must cease using coal or coke and either switch to natural gas or relocate outside the Zone. The TTZ contains 40 protected monuments, including three UNESCO World Heritage Sites – Taj Mahal, Agra Fort and Fatehpur Sikri.

The federal government provides sufficient funds for the conservation, preservation, and maintenance of these sites, including the supervision of activities by the Superintending Archaeologist of the Agra Circle. To maintain the current conditions, particularly in light of increasing tourism pressures, the implementation of an Integrated Management Plan is essential. This plan should provide clear guidelines for future infrastructure development and include a comprehensive Public Use plan to manage visitation effectively.

5.6 CAUSES OF DECAY

The decay of historical structures is primarily caused by natural weathering due to exposure to environmental elements like wind, rain, and temperature fluctuations. Pollution, particularly acid rain and industrial emissions, accelerates material degradation. Poor maintenance and neglect can lead to structural weaknesses, while biological growth such as moss, algae, and fungi can erode surfaces. Additionally, human activities, including vandalism, over- tourism, and unregulated urban development, contribute to the deterioration of these sites.

The main causes of decay for the Taj Mahal are air pollution and acid rain. The dust and dirt can be cleaned manually by using soft brushes if it is not penetrated much into the building material or sculpture. The deposit of dust, dirt and

other matters on the monuments or sculptures or architectural members not only gives an unpleasant look to them, but also responsible for the change in their appearance. The surface of white marble structure getting decolourization or appear in different colour is mainly due to the deposition of dirt, dust and SPM over them. Some studies also shows that Mathura Refinery and Yamuna River are also responsible factors for degradation of Taj Mahal.

The main causes for decay of Group of Monuments at Hampi are construction of bridges, increased vehicular traffic.

5.7 POTENTIAL THREATS

Several studies have indicated that the white marble of the Taj Mahal is affected by 'stone cancer', which results from exposure to harmful pollutants such as NOX, SOX, chromium, and other heavy metals in the surrounding air. To mitigate this damage, green vegetation has been planted around the monument to act as a 'buffer zone', as plants are known for their ability to absorb harmful pollutants from the atmosphere.

The group of Monuments at Hampi, a UNESCO World Heritage Site, faces several potential threats that could affect its preservation and cultural integrity. some potential threats are natural erosion, unregulated tourism, neglect and lack of maintenance, mining activities and climate change.

5.8 CONSERVATION APPROACH/TECHNIQUE

Conservation is the process aimed at preserving a structural's historical, aesthetic, cultural, and architectural importance. This process encompasses maintenance, preservation, reconstruction, restoration, and adaptation, or sometimes a combination of these approaches. Over time, various conservation methods have been employed, including direct conservation, preservation, consolidation, restoration, rehabilitation or adaptive reuse, reproduction, and reconstruction. For both of the selected sites, the conservation efforts primarily involve restoration techniques, along with the use of preservation and consolidation methods.

Figure 6 Conservation Project done for Group of Monuments at Hampi

Source: Conservation Project - Group of Monuments at Hampi, India - Google

Figure 7 Conservation Project done for Taj Mahal, India

Source: Conservation Project – Taj Mahal, India

Various steps were taken by the government for the conservation of Group of Monuments at Hampi, such as removing encroachments, addressing flooding, developing a solid waste management plan, building a visitor center, initiating a by – pass road, working with ASI to monitor tourism development.

For Taj Mahal , implementation of "Taj Protection Mission Management Board" (TPMMB) was set up in September 1996 as per suggestions of the Supreme Court of India for the environmental protection of the Taj Mahal. An area of 10,400sq km around the Taj Mahal is defined to protect the monument from pollution. Government is planning to

close a large number of industries near the Taj Mahal , cleaning up and preventing pollution discharge into the Yamuna, establishing a green mass transit system in Agra, improving the area's sewage treatment plans and establishing a rubber dam to maintain the flow of water in the river, which can help in conservation efforts.

6. RESULTS AND DISCUSSION

Both sites hold significant historical and cultural value, showcasing intricate depictions of Hindu mythology. They are also among the most popular tourist attractions, with Group of Monuments at Hampi drawing substantial visitors, while Taj Mahal experiences nearly seven times more than Group of Monuments at Hampi. The architecture of Group of Monuments at Hampi features the Dravidian style, whereas Taj Mahal reflects the Mughal architectural style. Both locations possess cultural and natural importance for society, highlighting the need for their conservation.

Table 1 Comparative analysis of study areas

S. NO.	PARAMETERS	GROUP OF MONUMENTS HAMPI	TAJ MAHAL
1.	Site area	41.5 sq.km	10,400 sq km
2.	Location	Hampi(town), Vijayanagara district, Karnataka, India	Agra, Uttar Pradesh, India
3.	Characteristics	Showcases the grandeur of the Vijayanagara Empire, features a diverse array of temples, palaces, and market streets, also shows rich cultural and trade history of medieval South India.	Structure blends Persian, Islamic, And Indian Architectural elements, featuring a grand dome, four minarets, and landscape gardens.
4.	Tourist influx, 2022 (Domestic And Inbound)	427194	3333533
5.	Architectural style	Dravidian Architecture, with some elements of Hoysala and Indo – Islamic styles	Mughal Architecture
6.	Materials Used	Local granite, burnt bricks and lime mortar	brick – in – lime mortar
7.	Criteria as per UNESCO	(i), (iii), (iv),	(i)
8.	Causes of Decay	Construction of bridges, increased vehicular traffic	Air pollution, acid rain
9.	Potential threat	Natural erosion, unregulated tourism, neglect and lack of maintenance, mining activities and climate change	Acid rain, water pollution, increasing no. of visitors at Taj Mahal

10.	Conservation Technique	Restoration, Maintenance and preservation	Sustainable tourism, restoration and consolidation
11.	Government Authority for Protection and management of Sites	Ancient Monuments and Archaeological Remains and Sites Act, 1958 (AMASR Act, 1958), AMASR(Amendment and Validation) Act, 2010, Rules 1959 of the Government of India and Karnataka Ancient and Historical Monuments and Archaeological Sites and Remains Act, 1961, the draft(bill) of Hampi World Heritage Area Management Authority Act, 2001	Ancient Monument and Archaeological Sites and Remains Act 1958 and Rules 1959 Ancient Monuments and Archaeological Sites and Remains (Amendment and Validation).

7. CONCLUSION

This paper highlights the significance of the Group of Monuments at Hampi and Taj Mahal as important landmarks. Both sites hold deep social and religious value for their communities and have the potential to attract a large number of tourists. Consequently, their preservation is essential. For conservation efforts, various methods such as restoration, preservation and consolidation are employed. At Group of monuments at Hampi, restoration and maintenance techniques are implemented to prevent further deterioration. At Taj Mahal, sustainable tourism, restoration and consolidation methods are applied to safeguard the structure's durability. Since both locations are major tourist attractions, they play a key role in the economic development of their respective countries.

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