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Sustainable Heritage Management- Need and Challenges

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ABSTRACT

The challenges to World Heritage conservation, combined with the effects of climate change, are unprecedented in human history. One of the key challenges is implementation of Sustainability at heritage sites. Natural World Heritage sites such as Grand Canyon, Great Barrier Reef, the Swiss Alps, Sunderbans provide local communities with natural resources and employment. Is development and conservation of heritage sites are mutually exclusive? Is it necessary to question whether the needs of the people are priority than preserving the heritage centres? UNESCO has identified 1052 World Heritage properties in 165 states because of their "outstanding universal value" as it belongs to all people in the world. World Wild Life Fund 's report, released in April 2016 estimates that almost half of these sites are threatened by industrial activities such as construction, mining, oil and gas exploration, illegal logging, or overfishing. Eleven million people live within sites, interlinking the livelihoods as well as food and water sources with the area's preservation. The well-being of communities is being put at risk by harmful industrial activities that degrade the environment, and that compromise the ability of these places to provide economic and non-economic benefits. Creation of local heritage network, effective model for conservation and sufficient funding mechanism for sustainability are a necessity in the present times. Heritage Management concepts are researched and discussed in international academic forums, still there is a lacunae in India. The researches highlight the heritage centres of India but draw a blank with regard to planning and practices adopted by various Indian agencies. A sustainable heritage management plan which is a comprehensive strategy for the conservation of any heritage resource that attribute a true value to the heritage protecting its integrity and longevity is the need of the changing times.

KEYWORDS

Heritage generally means inheritance of things in concrete terms from ancestors. Customs, conventions, practices, traditions etc., passed on from one generation to the other also form heritage. Heritage is a broad concept that encompasses all aesthetic, architectural, cultural, historical, spiritual, indigenous and natural inheritances. The Ministry of Urban Development, Government of India describes 'Heritage building' means and includes any building of one or more premises or any part thereof and/or structure and/or artifact which requires conservation and / or preservation for historical and / or architectural and / or artisanary and /or aesthetic and/or cultural and/or environmental and/or ecological purpose and includes such portion of land adjoining such building or part thereof as may be required for fencing or covering or in any manner preserving the historical and/or architectural and/or aesthetic and/or cultural value of such building.

India does not have a statutory body to list heritage buildings and sites, Indian National Trust for Art & Cultural Heritage (INTACH) has inventoried about 60,000 buildings in around 150 cities which is still only the tip of the ice berg as there are estimated more than 4000 heritage towns and cities in the country. INTACH also launched its National Register of Historic Properties in 2000 in an attempt to comprehensively make an inventory of the built heritage of this country. This database aims at identifying and recording the built heritage for research, publication and protection of the built heritage of the country. It also hopes to serve as resource material for heritage regulations and conservation areas and help in framing of Heritage Laws. Similar initiative has also been recently launched by the Government of India through the National mission for Monuments in 2007, the nodal agency for this mission is the ASI. United Nations Educational, Scientific and Cultural Organisation (UNESCO) in its World Heritage Convention in 1972 have classified heritages as cultural and natural as given below. Cultural heritage in turn is distinguished into tangible and intangible subgroups.

Cultural Heritage			Natural Heritage
Tangible Heritage		Intangible Heritage	
Immovable	Movable		
i) Monuments: Archaeological sites Industrial archaeology ii)Buildings: Architectural works Historic centres, Groups of buildings iii) Sites: Cultural landscapes Historical parks and Botanical gardens	i) Archives ii) Museum collections iii) Libraries	a) Music b) Dance c) Literature d) Theatre e) Oral traditions f) Traditional performances g) Social practices h) Know-how i) Crafts j) Cultural spaces k) Religious ceremonies	a) Natural and maritime parks of ecological interest b) Geological and physical formations c) Landscapes of outstanding natural beauty d) Allied natural themes

India with its vast Historical background has ten thousands of tangible immovable cultural archeological and heritage common assets with unique character and distinct identity. The sheer number of heritage resources created in India in the last 100 years or even the resources created after Indian independence is staggering. Even if just the immovable heritage is classified roughly in the following typology as per the INTACH, the number is astounding.

i) Residential heritage: Bungalows, Forts, Havelis, Palaces, Town Houses, etc.
ii) Commercial heritage: Bazaars, Factories, Garages, Sea ports, Shops, Warehouses, etc.
iii) Community heritage: Air ports, Colleges, Courts, Hospitals, Libraries, Police stations, Post offices, Railway Stations, Schools, etc.
iv) Religious heritage: Churches, Dargahs, Gurudwaras, Mosques, Shrines, Temples, etc.
v) Memorials heritage : Head stones, Historic inscriptions, Samadhi, Tombs, etc.
vi) Heritage precincts: Historical and traditional places such as heritage villages; craft centres; urban precincts and streets-

capes; historic and trade routes; academic, scientific, technological and industrial establishments and transportation sites, etc.

vii) Heritage landscapes: Landscapes (gardens, open areas, parks, etc.); scenic sites (hills, hillocks, sacred grooves, valleys, wooded areas, etc.) and water bodies (rivers, streams, reservoirs, tank, wells, etc.), etc.

Cultural heritages in this country can be traced to Paleolithic age as evidenced from around 30000 years old Bhimbetka Rock Shelters near Bhopal in Madhya Pradesh. As aptly expressed by Poonacha (2007), "*Since ancient times, India has been well-known for her exhaustive architectural manifestations in different media of expressions of socio-religious nature*". Thus, the country is resplendent with temples, forts, monuments, palaces etc.,that stand as testimony to the long, rich and varied heritage of the nation. Some of these marvelous old cultural monuments of universal acclaim are listed among World Heritages by UNESCO. India now has 35 sites, including 27 cultural properties, seven natural sites and one mixed site, notified as World Heritage Sites. The latest entries in 2016 were (1) Nalanda University (2) Capitol Complex and (3) Khangchendzonga National Park (mixed site).

Affiliation of World heritage tag to an archaeological site certainly helps the site in getting international attention of heritage, professional and expertise guiding and assistance for conservation, enhancing the tourism prospects of the site and increase the possibility of getting financial incentives for the protection and conservation efforts to the concerned management authorities. The financial benefits of getting a World Heritage Site tag though limited provides international assistance to member countries in the following areas: preparation for the nomination of sites, training activities, technical cooperation, emergency measures and for promotional and educational activities.

Heritage Conservation and Management

Heritage management is the practice of managing cultural heritage. It is a branch of cultural resources management although it also draws on the practices of cultural conservation, restoration, museology archeology, history and architecture. It is concerned with the identification, interpretation and maintenance

The uniqueness and diversity of India's heritage is reflected in its urban morphology, building typologies, social structure, religious beliefs, traditions, civic activities and varied natural resources. Accordingly, various State Governments, under relevant state legislations have identified thousands of historical monuments for protection. Yet, an equally strong number of historical structures and heritage areas are lying uncared for in the country (Sanyal, 2009). The rapid urbanisation in the country being witnessed in recent decades has been accelerating the pace of change in all walks of life including heritages. As a result, majority of Indian cities and towns are exposed to strong extraneous and fast growing forces that disturb the delicate balance among cultural, physical, social and ecological aspects of the land symbolising various categories of heritages. Ascribing little significance to the heritage character of a structure or environment, modern buildings are constructed in place of the old ones. As aptly commented by Jain (2007), in recent decades, the treasure of traditional urbanism has often been trampled upon in zeal to develop the modern cities together with 'property' oriented approach. This kind of disheartening situation suggests the urgent need of strategic plans for a region to protect and preserve heritage resources through adoption of an integrated approach and its immediate implementation in truth and spirit is essential to keep the heritage resources attractive and everlasting.

Heritage Management tries to call for alternative ways and means to develop mechanisms for the revival and revitalization of all such built environs as well as intangible and natural heritages. It is just not enough to quote Article 51A (F) of Indian Constitution, that casts a duty upon every citizen to value and preserve the rich heritage of the composite culture. In order to pass on to future generations what is currently identified as being of cultural significance today, we must imbibe good conservation practices especially for heritage buildings in order to prevent them from deterioration and extend the life and basic functions of these buildings. This would be difficult to achieve if the best practice approach to the sustainable maintenance management of heritage buildings is not fully adopted.

Heritage Conservation

Heritage conservation is a continuous value based process involving a wide range of activities. The significance of building maintenance has been emphasised in almost all primary documents and legislations intended for the conservation of heritage buildings. In 1972, under the auspices of UNESCO, the international community of states have adopted the "*Convention Concerning the Protection of World Cultural and Natural Heritage*" establishing a system of collective protection on a permanent and scientific basis.

The approach of 'urban conservation' was elevated to 'integrated urban conservation', in which conservation is seen as an integral part of development planning. This concept was adopted for the first time in 1985 in "The Granada Convention for Protection of the Architectural Heritage of Europe". This approach aims at achieving social, cultural and economic development thereby playing an important role within the wider context of urban planning. Integrated conservation significantly contributes to uphold the diversity and uniqueness of a city while highlighting the conservation values relevant to the lives of the people at large. In its further efforts, UNESCO has created National Committees of ICOMOS in every country and it currently has over 110 such Committees including the one in India. These committees bring together individual and institutional members and offer them a framework for discussion and exchange of information regarding various heritage issues. Each National Committee adopts its own rules of procedure and elaborates its own programme according to the goals and aims of ICOMOS. Indian chapter of this body works in close cooperation with INTACH, ASI and other scientific laboratories

Heritage Management plans of India

The Constitution of India directs the state and its citizens to protect and preserve the nation's rich heritage. The Government of India and its federal members promulgated several laws to conserve and protect heritages under their purview. Cultural heritages in the country, among the many, are protected through the following main laws.

1. The Indian Treasure Trove Act, 1878
2. The Ancient Monuments Preservation Act, 1904
3. Rajghat Samadhi Act, 1951
4. The Ancient Monuments and Archaeological Sites and Remains Act, 1958
5. The Ancient Monuments and Archaeological Sites and Remains Rules, 1959
6. The Antiquities and Art Treasures Act, 1972
7. The Wildlife (Protection) Act, 1972
8. Environment (Protection) Act, 1986
9. Bio-diversity Act, 2002
10. The Ancient Monuments and Archaeological Sites and Remains (Amendment and Validation) Act, 2010

Foundations for heritage conservation in India were laid down way back in the pre-independence era at the time of inception of Town Planning Acts (Madras Town Planning Act 1920 of Tamilnadu and the Travancore Town Planning Act 1932 of Kerala) itself. The planning tools developed in 1960's for the entire country are not sufficient to cater to the protection of rich and varied urban heritages of India. Under this scenario, a national society named "Indian Heritage Society" (HIS) (formerly known as Indian Religious Society) was formed in 1993 with the motto of "*Preserving Indian heritage for the next generation*". Society's main objective is to draw the at-

tention of the public and the government to the dangers that threaten the environment due to destruction and ill-planned exploitation of the natural resources, specifically the heritage of art and architecture. It aims to devise appropriate measures for their protection, preservation and proper utilization.

Another major initiative was the establishment of National Monuments Authority (NMA) under the Ministry of Culture, Govt. of India as per provisions of The Ancient Monuments and Archaeological Sites and Remains AMASR (Amendment and Validation) Act, 2010 . Several functions have been assigned to the NMA for the protection and preservation of monuments and sites through management of the prohibited and regulated area around the centrally protected monuments. One amongst these responsibilities of NMA is also to consider grant of permissions to applicants for construction related activity in the prohibited and regulated area. It aims to create awareness amongst the people and various stake holders on the need for conservation and preservation of the built heritage.

With the intention of Urban development that aim at blending 'nature and culture for a better future' a new scheme was launched by the present government. The National Heritage Development and Augmentation Yojana (HRIDAY) that seeks to preserve and rejuvenate the rich cultural heritage of the country was launched by the Minister of Urban Development Shri M.Venkaiah Naidu in January-2015. It aims to promote integrated, inclusive and sustainable development of heritage sites, focusing not just on maintenance of monuments but on advancement of the entire ecosystem including its citizens, tourists and local businesses. It provided Rs.500 cr to the following 12 cities selected in the first phase under the 'Central Scheme' of HRIDY.   Based on city population, Varanasi was allocated Rs.89.31 cr, Amritsar-Rs.69.31 cr, Warangal(Telangana)-Rs.40.54 cr, Ajmer-Rs.40.04 cr, Gaya-Rs.40.04 cr, Mathura-Rs.40.04 cr, Kanchipuram-Rs.23.04 cr and Vellankini-Rs.22.26 cr, both in Tamil Nadu, Amaravati(AP)-Rs.22.26 cr, Badami (Karnataka)-Rs.22.26 cr, Dwaraka(Gujarat)-Rs.22.26 cr and Puri-Rs.22.54 cr.   HRIDAY promotes the involvement of state and local urban bodies, NGOs, spiritual organizations and private sector for effective implementation of the scheme. The Scheme supports development of core heritage infrastructure projects which shall include revitalization of urban infrastructure for areas around heritage assets identified / approved by the Ministry of Culture, Government of India and State Governments. These initiatives shall include development of water supply, sanitation, drainage, waste management, approach roads, footpaths, street lights, tourist conveniences, electricity wiring, landscaping and such citizen services.

Heritage conservation has to be carried out on a continuous basis and comprehensive listing and grading are required to achieve the task of effective conservation. According to Das and Basu (2007), long-term protection of heritage depends upon the encouragement, sustainable development of local resources and promotion of appropriate tourism as a means of conserving them so that local and regional economies get benefitted. A good heritage management plan shall essentially include inventory of resources, their designation and conservation practices while taking care of fiscal aspects, manpower, publicity and role of locals. Cities with rich heritages are being gradually threatened by unplanned urbanisation and tourism. Fortuitously, increasing awareness about heritages in recent decades has been leading various organisation to identify heritages as well as to delineate heritage zones based on a set of defined criteria.

Among the popular practiced ideas, the following are top most; Pauline and Roosmalen (2005) suggested to UNESCO's World Heritage Centre to adopt a new set of criteria for the identification and documentation of modern colonial built heritage based on nine parameters, *viz.*, circumstances, working practice, framework, local conditions, external influences, adjustment and adaptations, contemporary references, characteristics of architecture and guidelines for town planning. In

a similar manner, Gupta (2007) stressed cultural significance, historic integrity and historic context as the three key concepts for the identification and documentation of built heritages in India. Much the same way, Das and Basu (2007) had developed a methodology for identifying heritage zones through systematic mapping for environmental protection, tourist appreciation and local community.

The main goal of heritage conservation is to protect the significance of a place through expression of the existing physical embodiments. Cohen (2001) suggested that the aim of conservation should be to promote life characterized by a strong sense of continuity and aesthetic qualities alone are not enough to achieve this. The focus should not always be on the monuments, but also on everyday urban activities so that the ultimate aim of conservation is not confined just to the material but as well extends to the values embodied in a heritage so as to avoid unwarranted emphasis on any particular value at the expense of others. All this precisely means that several criteria as listed in the following table, shall be considered while aiming at heritage conservation of any particular built.

	Criteria	Significance
1	Cultural prominence	Cultural fabric of a society, its identity and continuity
2	Functional peculiarity	Integral relation between a building (physical landmark, directional object or symbolic representation) and the landscape around (non-built environment)
3	Social relevance	Impact of societal growth, hindrance to comprehensive development, nuisance to old neighbourhood and safeguarding of cultural values during tourism
4	Architectural significance	Architectural style, specialty and uniqueness of the building
5	Aesthetic value	Visual appeal, condition and quality of the building
6	Historical importance	Historical phenomena, processes having chronological as well as geographical affinity
7	Economic potential	Revenue generation possible to the government or a heritage owner through toll, taxes and tourism

Source: Fielden (2003)

In order to achieve this herculean task of conservation, establishment of a permanent effective system of collective protection on modern techno-scientific lines is highly essential and this can be achieved through a good 'Management Plan'. In order to formulate such a comprehensive strategy, the futuristic plans of a region that take care of a city's or town's growth trends involving community needs, financial position, geophysical conditions, infrastructural requirements, stakeholders aspirations, etc. shall be identified. . A 'Management Plan' is broader and goes beyond the conservation plan by including government policies, political decisions, transportation facilities, tourism avenues, etc. In addition, laws and legislations need to be modified or amended time and again according to the context of the changing times, society and their character. Land use pattern and development plans shall also incorporate all precautions to protect the traditional environment in all its truth and spirit. In each of these steps, qualitative judgments are most important and inputs from the community are also equally essential. However, these two aspects, i.e., legal framework and management tools should clearly be distinguished as two faces of a coin that are inseparable aiming at the single objective of keeping the heritages at the zenith of their beauty.

Heritage building conservation promotes sustainable development by conserving the embodied energy in the existing buildings. Maintenance must take a leading role in conserving the heritage values of the buildings. Heritage buildings are valuable assets to the tourism industry due to their strong influence in motivating foreign tourists to visit the country. Therefore, it is paramount to conserve these build-

ings by continuously caring and protecting them from being destroyed so as to prolong their life span and functions. It is mainly through heritage conservation one can pass onto future generations what is currently identified as being of cultural significance today, and this would be difficult to achieve if the best practice approach to the sustainable maintenance management of heritage buildings is not fully adopted. A well-maintained heritage is also very important in addressing risks related to natural and human-made disasters. Experience has shown how the degradation of natural resources, neglected rural areas, urban sprawl and poorly engineered new constructions increase the vulnerability of communities to disaster risks, especially in poorer countries. On the other hand, a well-conserved natural and historic environment, based on traditional knowledge and skills, considerably reduces underlying disaster risks' factors, strengthens the resilience of communities and saves lives.

Conservation efforts – sample case studies in India

Name of the heritage site	Threats faced	Heritage Management Plan adopted
Chandramauleshwar Temple, Hampi The temple is located on the Rishimukh Island that is situated near the northern bank of River Tungabhadra. The temple is dedicated to the worship of Lord Shiva.	unplanned development inadequate protection seasonal flooding misuse by local population Neglect vandalism	The Global Heritage Fund uses a development model called "Preservation by Design" Application of the latest or most effective methods and technologies Formulation of conservation strategy through partnerships of stake-holder organizations to enhance long-term sustainability Involvement of local communities [stone masons, local ferry men and sadhus] to rebuild the temple Ancient bridge reconstructed and made useable for visitors Promotion of local economic development by capitalizing on the strengths of their unique cultures and archaeological resources.
Name of the heritage site	Threats faced	Heritage Management Plan adopted
Jaisalmer Fort, India The last living fort in India which is crumbling suddenly due to natural and man-made calamities	Sewage system built by the govt. officials without understanding the structure Tourist boom Use of 50,000 gallons of water by locals and visitors Climate change [increase in rainfall suddenly] Earthquake damages	Indian National Trust for Art and Cultural Heritage assessed the damage The engineer's rebuilt damaged outer walls with golden sandstone dug from nearby quarries and even employed the services of a camel to grind lime plaster with its hooves, according to the traditional method. To guard against damage from future tremors, they shored up weakened roof beams and inserted copper pins in the walls to protect against lateral thrust. Renovation of fort's largest structure, the granary. Built from four different types of stone, it once held enough grain to feed the fort's residents for 12 years. Local authorities plan to turn the granary into a spice museum Propose to begin an amphitheater to showcase Rajput music

Name of the heritage site	Threats faced	Heritage Management Plan adopted
Ajanta Caves One of the most significant examples of Indian cultural history related to 2 century B.C. to 4 century A.D. Known for its structure, painting, carving, stone work, sculptures and paintings. They are the most authentic example of Buddhist Indian History.	Fragile mural paintings Lack of microclimate control Progressive structural deterioration Absence of restoration and conservation codes adopted and implemented on a regular basis following international conservation norms inadequate security encourages vandalism and theft.	Conservation of Monuments Improving structural integrity Geological investigations of caves for formulating conservation plan Structural Conservation Up-gradation of core infrastructure Water supply, electricity, communication Improve Accessibility -Airport, roads, connection from important rail heads Environment Management -Afforestation, low pollution local transportation, removing encroachments Visitor Management System
Name of the heritage site	Threats faced	Heritage Management Plan adopted
Amber Fort Blend of both Hindu and Muslim architecture. Built over a span of 138 years and most of its construction during the period of Maharajaha Mansing I (1589-1614)	serious decay due to seepage of moisture roof leakage blocked drains modern architectural accretions disfiguring the historic ambience	Amber Management and Development Authority (ADMA) Restoration of two of the courtyards, the west façade and the eastern entry areas. Attempts to improve the spatial ambience of the monument Restrictions on the modern buildings around the fort. 45 percent of the lost images of Amber palace is to be restored
Brihadisvara, Gangaikondacholapuram One of the three Great Living Chola Temples. Brihadisvara temple, Tanjavur	Neglect negligence caused extensive vegetation growth Vegetation caused dislodgement of sculptures British officer in 1836 ordered blasting of the gateway and the compound for fetching stone	Most of the building had collapsed The original position in the structure was worked out. Those do not integrate was kept aside. The reconstruction was done to the height for which evidence was seen at that time removal of accumulated earth and bringing the original working level back into use Periodical chemical preservation of the Vimana Removal of accretional growth
Shore temple, Mahabalipuram 8th century AD	The proximity to sea has caused immense damage to the structure. • The features are rounded • The joints had widened	A massive groyne wall of stone was constructed to push the sea away from the monument • Periodical removal of salts by paper pulp method is being undertaken • Plantation are grown to arrest the speed of the wind The groyne wall built around the temple played its role in saving the temple during the 2004 Tsunami.

Benefits of Heritage Conservation

Preservation of historic properties demonstrates long-term vision by preserving irreplaceable cultural resources and promoting sustainability practices by conserving the limited environmental resources. Several unique benefits could be aug-

mented from cultural heritages kept in their authentic glory through good conservation practices at any place. Heritage structures

i)   It is the visual and tangible conservation of cultural identity
ii) Demolition and new construction not only consume pres-ent-day energy, but negates and wastes the past energy investment made in a building. Preservation is an effective method of sustainability.
iii) Reveal great architectural values and practices
iv) Unravel the underlying and/ or contemporary scientific thinking
v)   It can lead to innovations in adept utilisation of materials available around
vi) Reflect the weather and local conditions prevailing during the remote past
vii) Generate awareness about the eco-benign aspects
viii) Display the socio-cultural and or religious orientation of the people
ix) Sub-serve as centres of tourist attraction and education
x)   Remain as pride possessions of the land and people.

Thus, heritage offers both tangible and intangible advantages of history to the present as well as future generations.

Efforts to overcome challenges in Heritage Management
Managing heritage asset requires a systematic process and when carried out in planned manner, it can result in preserva-tion of heritage value but there are issues and challenges that need to be addressed. Sustainable strategies need to be well planned, action-oriented, collaborative and eed to adapt to different levels of development. Some of the major challeng-es in heritage management can be overcome by the following ways;

Creation of a dedicated Government organization for her-itage conservation:
Archaeological Survey of India (ASI) is the prime organization responsible for the protection, conservation and preservation of archaeological monuments in India. There is no such ded-icated Government of India establishment to serve the cause of Conservation and preservation of heritage monuments. The responsibility is shared by several agencies such as Indi-an Heritage Society (HIS), International Council on Monu-ments and Sites (ICOMOS) (India) and UNESCO-lead Indian Heritage Cities Network (IHCN), Central Public Works Depart-ment (CPWD), Public Works Department (PWD) of state gov-ernments and Urban Local Bodies (ULBs). They either inde-pendently or together act in the interest of heritages existing in various provinces in the country. If there is a singular agency with a dedicated mission of heritage management, the task may prove to be more successful and sustainable.

Focus on heritage education
Dissemination of heritage education is an essential component of heritage management. It is a way to augment the learn-ing experience through onsite visitation and appreciation of heritage resources and what they tell the visitors. A major goal of heritage site visitation and heritage education is to create awareness about the heritage resource and spread a quest for heritage   preservation among the local population and the visitors. The children (adults too) must be provided heritage education that will help them learn and appreciate the local customs, traditions, history and culture without altering and damaging the heritage resources.

Promotion of Archeological / Heritage tourism
Heritage tourism should be developed in such a manner that it could be able to preserve historic and cultural resources and boost economies by satisfying the basic inquisitiveness of the visitors.

The popularity of archaeological sites as tourist attractions makes them valuable sources of revenue, but economic ex-ploitation of sites is often not matched by reinvestment in proper site management to ensure protection of sites and

their continued enjoyment by visitors. Archaeological sites are fragile resources, and inadequate site management results in deterioration - or even destruction - of the site and its social, historical, educational, and economic potential. Heritage man-agement should not only undertake identification, manage-ment and protection of the heritage values but it must also be involved in understanding the impact of tourism on communi-ties and regions, achieving economic and social benefits, pro-viding financial resources for protection, as well as marketing and promotion. By promoting archaeological heritage tourism, developers can successfully help in the preservation of cultural and historic resources while boosting local economies by gen-erating jobs, new businesses and generating revenue to the governments. However, in Indian tourism scenario, little infor-mation exists about the role of archaeological heritage tourism development for the preservation and conservation of cultural resources.

Quest for Sustainable heritage management
Popular research survey results convey that overcrowding, wear and tear, pilfering, graffiti and traffic problems are signif-icant and widespread cause for concern in heritage manage-ment. There is also a dilemma to match visitors' expectations and lower their impact without compromising on the authen-ticity of the experience. Archaeological Heritage Management is a vital part of heritage protection activity against unplanned tourism development of a destination. Sue Millar (1989) has remarked that the concept of heritage management has aris-en in response to the special needs of the heritage industry. Heritage attractions represent irreplaceable resources for the tourism industry and therefore, conservation is a vital compo-nent of their management. Heritage sites need to have their own unique attributes emphasized and the interpretation and presentation of the attraction must be such as to accommo-date the needs of the visitor while at the same time, manage-ment has a responsibility to the community to preserve the site for posterity. Experts emphasize the need for a manage-ment team consisting of heritage management experts, local community representatives, voluntary organizations, and tour-ism industry experts who can work effectively for the heritage management activities.

Measures to overcome threats to Heritage Properties
A cultural or natural heritage is of remarkable significance to the entire world or a nation or a place and as such be pre-served as a part of heritage of the mankind. According to an international report, main threats to heritage centres at the international level are socio economic development pressures, infrastructural development, environmental changes, demoli-tion and vandalism.

Heritages are increasingly threatened due to *rapid develop-ment pressures and redevelopment activities* in several areas including urban historical sites all over the world. Population growth, changing life styles, urbanization and economic pres-sures contribute toward the lack of sensitivity from the public and adequate concern of the government in taking necessary measures to protect heritage properties.

Borrowed concepts of urban aesthetics have been overlook-ing the historic, cultural and symbolic contents of traditional urbanism leading to overall deterioration of the latter. UNES-CO Convention-1972 had observed that cultural and natural heritage are increasingly threatened with destruction not only by traditional causes, but also by *formidable socio-econom-ic phenomena.* Many heritage resources in the country have been badly damaged or seriously affected particularly due to repairs, renovations, replacements carried out using inappro-priate materials, irreversible works or actions, unsuitable inter-ventions and poor maintenance.

Insufficiency in institutional framework; organisational apathy; flawed planning, design, development and control followed by legal and enforcement deficiencies and lacunae in their implementation are the important causes adding up to the damage of Indian heritage across board (Jain, 2007). All is not

lost, according to World Wildlife Fund report released recently, there are many positive case studies. For example, in the wetlands of Ichkeul National Park in Tunisia, a sustainable management plan has saved bird populations and helped double the number of tourists coming to birdwatch, hike, and camel trek with local guides. A new buffer zone around Chitwan National Park in Nepal has brought the community back on board, committing half of tourism revenue to local development, and returning people's vital rights to sustainably source wood and thatch inside the park. And Tubbataha Reefs Natural Park in the Philippines has ramped up their management of local fisheries, leading first to increased fish stocks and later to increased tourism and incomes. The report proposes five principles for promoting the mutual well-being of all Heritage Sites' inhabitants:

1. assessing the sites' direct and indirect value;
2. long-term thinking;
3. local stakeholders;
4. informed, transparent policymaking;
5. Enforcement.

There are only few heritage sites that produce sufficient surpluses to facilitate investment in sustainable practices. It is necessary in the present socio-economic scenario to improve the financial output of the heritage centre along with the enhanced conservation activities.The strategies for the sustainable heritage management must deal with the capacity building, improved access to information, training to personnel, strategic leadership and necessary resources to generate funds. Creation of local and regional and national networks can be very useful. As the gravity of the threats to heritage centres is exhilarating, so must be the efforts to conserve and protect the heritages. The ability to access, enjoy and care for one's heritage is essential for what the Nobel Prize winner Amartya Sen calls the "capability of individuals to live and to be what they choose", that is a fundamental component of human development. Protection of heritage resources is indicative of one's culture and development.

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