



***Managing unique heritage of India-
Approaches and Options***



**JIT KUMAR GUPTA
AND
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FOREWORD

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All nations and communities value their heritage and ensure its preservation for posterity, for making aware their future generations about their glorious historic past. Globally, heritage is known to carry enormous value and importance, both socially and economically. Heritage has been leveraged by numerous cities and nations to promote the economy, create employment, and generate prosperity. Considering the role and importance of built heritage, it will be important that these valuable assets, created in the past, are properly identified, preserved, and conserved.



India, with a long history spanning over five thousand years, has been rated as one the oldest and most valued civilizations in the world. During its long and historic journey, the country has inherited a huge wealth of manmade environment, created by various communities during its long history. However, due to lack of awareness, the majority of the heritage has either been lost or is facing enormous challenges for survival due to large scale misuse and abuse perpetrated by people and communities.

Considering the relevance and criticality of heritage, this eBook titled, ‘Managing Unique Heritage of India – Approaches and Options’, written by Jit Kumar Gupta and Yamini Gupta, is a valuable resource to create awareness among readers, researchers, and students about India’s enormous repository of built heritage and the need and importance to preserve it. The Book, through its various articles, attempts to bring out the entire context of heritage, its identification; issues, challenges and bottlenecks faced by it in its management in face of rising urbanization, globalization and liberalization of economies and the options, which could be exercised to make the entire mechanism of heritage conservation professional, effective and efficient. For rationalizing the entire context of heritage conservation, the book makes several suggestions, in

terms of making the process of heritage management people-centric; involving communities in not only its identification, preservation but also its management and safety. Suggestions have also been made to make it an integral part of the planning and development process of cities and towns; empowering local institutions, creating a dedicated fund, evolving heritage regulations, incentivizing the heritage property owners for developing a culture of heritage conservation.

I am happy that the book also brings out and focuses on the enormous wealth of heritage created in the State of Punjab in terms of walled cities, Havelis, religious and educational institutions, palaces, bungas, etc, and makes suggestions that can be exercised at local and state level to preserve heritage for posterity; making the State of Punjab, a role model in the country in the domain of heritage conservation. Hopefully, planning and development agencies in urban and rural areas; communities and NGOs, and the CBOs working at the local level will look at the suggestions made in the eBook for their applications to preserve the valuable heritage and make them an integral part of community and city living.



PREWORD

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The notion of cultural heritage at international level has undergone a marked shift during the last few decades. While earlier, the understanding was predominantly monument-centred, where heritage was largely understood as isolated grand structures or archaeological sites recognized mainly for their historicity by separating the past from present. However, the contemporary definition of cultural heritage includes vernacular structures, historic urban areas, cultural landscapes and intangible aspects, characterised by their living and dynamic nature, where continuity defines the link of past and present and close interrelationship with the local social and environmental context.



In light of this new understanding of heritage, its protection and management is not merely restricted to preservation of physical fabric but entails strategies for managing change to enable continuity of past into future. This means that rather than pitting heritage conservation against development, it is seen as an approach for sustainable development. In the face of increasing challenges due to rapid urbanization, disasters caused by natural and human induced hazards and the impacts of climate change, there is an urgent need to develop risk preparedness measures for protecting the present of our past for the future. Also the role of cultural heritage in building resilience of communities through rediscovering and adapting traditional knowledge gained over time needs recognition.

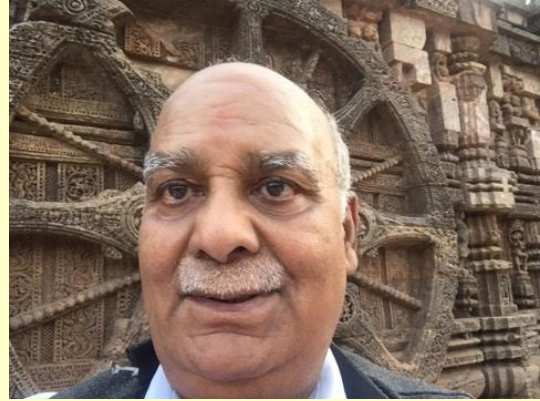
This ebook titled ‘Managing Unique Heritage of India – Approaches and Options’ edited by Jit Kumar Gupta and Yamini Gupta very eloquently brings forward the contemporary challenges and opportunities for the protection and management of cultural heritage in Indian context. Reader friendly language and rich references of case studies of Amritsar and Jhunjhunu makes it a very useful publication especially for the students and faculty of architecture and planning. I am sure this will enlighten the readers towards enormous task for protecting and managing our rich cultural heritage for the future generations.

Jit Kumar Gupta
Yamini Gupta



PREFACE

Built heritage is known for its role and importance in making value addition to the urban habitat, connecting past with present and charting the future growth and development trajectory of any community, society and nation. Heritage allows society to showcase its glorious past, making people learn about the context of their living, quality of life, building materials, construction technologies and the principles adopted in planning and designing their shelter



and settlements in the past. Heritage is also known for the value it holds, to make people learn about the social fabric, culture and identity of their ancestors. Accordingly, heritage remains valuable, both locally and globally.

Built heritage is known for its potential of being major driver of economy, prosperity, employment, growth and development. It has enormous capacity to leverage economy and minimise poverty. Nations take pride in their built heritage and take appropriate measures to preserve, protect and manage them for people to visit, enjoy and learn, both from within and outside. Developed nations are known for their capacity, capability, systems and processes to value and preserve their built heritage but most of the developing nations are fighting a losing battle against damage and destruction being caused to manmade wealth, on continued basis, due to lack of skill, manpower, resources, commitment and awareness on the part of communities, institutions and parastatal agencies, of the role and importance of built heritage. Majority of these nations have already lost most of the valuable built heritage to posterity, due to lack of appreciation on the part of the community, misuse, abuse and rapid commercialisation. In many cases built heritage has been sacrificed at the altar of land speculation and commercial exploitation.

Considering the role and importance of the built heritage for communities and nations, this e-book has been prepared which is primarily, a compilation of eight articles which have been written by authors, individually and collectively, over a period of time, spanning over four decades on the various facets of heritage conservation and preservation. Articles try to define the context of built heritage, major road-block hampering the identification and preservation of the built heritage besides looking at the options for effectively managing the valuable built heritage.

Articles look at the city and subject specific issues related to heritage in terms of the existing legal framework guiding the heritage; capacity of urban local bodies to identify and manage the heritage; absence of trained manpower for managing the heritage; non-involvement of communities; lack of resources; non-involvement of NGOs, CBOs, private, corporate sector; lack of integration between heritage and planning; low priority to heritage conservation in city management; absence of dedicated manpower at local level; absence of heritage regulations; lack of documentation; non-involvement of the academia; lack of incentives; misuse and abuse of the built heritage for commercial use etc.

In search for the appropriate solutions for identification, promoting, preserving, conserving and managing the built heritage, articles suggest numerous options in terms of; creating a dedicated mechanism at local and regional level to identify the built heritage; relooking, reviewing and redefining the legal framework of the built heritage; involving communities in identification, preserving, protecting and managing the built heritage; making heritage conservation people and community centric; creating awareness about the role and importance of built heritage; creating a dedicated heritage fund at local, state and national level to promote the heritage; incentivising the owners of heritage properties; adopting the mechanism of listed buildings; making heritage conservation integral part of the planning and development process; launching more dedicated course in the domain of heritage conservation to have adequate manpower to guide the various agencies; earmarking dedicated budgetary allocation for heritage by the development agencies; setting up heritage commission and heritage committees at state/local level; promoting heritage tourism and making heritage conservation integral part of education system etc. Articles invariably reflect the personal views of the authors and their perception about the entire gamut of heritage preservation and conservation.

EBook, while looking at the various issues related to build heritage, also tries to define the role of water conservation as the promoter of the built heritage in the Jhunjhunu (Rajasthan) which is known for water deficiency and where water conservation remains the major priority for the local community. Paper defines how the water conservation has led to creation of wonderful structures serving the dual purpose of water conservation through community participation. It also lists the present state of their neglect and options to revive them to its old glory.

Article on - Learning from Planning and Designing of Havelis in the Malwa Region of Punjab, as the Role Model of Sustainable Built Environment-, tries to explain in detail what went into their planning, designing, orientation, earmarking of spaces for living/non-living, materials and building technologies to promote sustainability in the built environment, bringing out its relevance in the present context also.

Authors would like to thankfully acknowledge the excellent work done by the Town and Country Planning Organisation, Government of India, Ministry of Housing and Urban Development, in the domain of promoting management of built heritage by framing Model Regulations for Heritage Conservation and Preservation. These Regulations, which have been made part of the eBook for wider dissemination, would help cities to put in place such regulations at the local level to effectively and efficiently manage the built heritage. List of monuments included in the World Heritage list has also been appended to make readers aware about the enormous wealth India as a nation holds. This list can be increased manifold, if communities undertake the task of identifying the valuable built heritage existing in the various parts of the country.

I would like to take this opportunity to express my gratitude to Ar. Yamini Gupta, Assistant Professor, Chitkara School of Planning and Architecture for her continued support without which this book would not have been possible. Her sincerity, commitment and dedication

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remain unmatched. Despite her pre-occupation with academic and other professional pursuits, Yamini worked tirelessly, both day and night, compiling and arranging the articles and provided all necessary support to complete the document in the shortest possible time. She has been a wonderful and excellent support throughout the journey of this eBook. She has co-authored the article on water management in Jhunjhunu.

I would like to place on record my gratitude to Dr Bhupinder Singh, Professor and Head, Department of Architecture and Planning, Maharaja Ranjit Singh Punjab Technical University, Bhatinda and Dr Prabhjot Kaur, Professor and Director, IKG PTU Campus, Mohali for their contributing of the article on the Havelis in the Punjab.

This is the third eBook which is being brought out by the author based on the articles written, presented and published in different seminars/ conferences, both individually and jointly. The earlier two eBooks pertained to - Planning and Designing State of The Art Healthcare Facilities, which looked into the various facets of planning, designing and management of the healthcare institutions. Second eBook- Making Cities Great Places to Live- dwelt on the prevailing patterns of urban development showcasing the context of urbanisation, issues faced by the cities in India and the options to make them more liveable, sustainable, safe and resilient.

Readers may find some repetitions in the text of papers, which are not deliberate, since the papers have not been edited while compiling the eBook. Each paper has to be read as an independent text. Repetitions of the text showcase the importance of the issues raised and options defined keeping in view the larger ambit of heritage conservation and preservation and should be taken as the limitations of this eBook.

I would also like to take the opportunity of acknowledging with gratitude, the valuable contribution made by Sh Animish Thakar of Krisha Graphics, Mumbai, who has been source of great inspiration and constant motivation. It was his initiative which made me start writing such eBooks. Credit goes to him for making value addition to the eBook by converting a document into a Book in the real sense of the term. For his constant advises, support and contribution, I remain grateful to him.

I hope and wish, this eBook will help students of architecture, planning and professionals working in the domain of built environment, to better understand and appreciate the context and value of built heritage as great asset for humanity and creativity and make all efforts to preserve and promote it for posterity.

I would like to dedicate this eBook to the sacred memory of my mother, Late Smt Leela Gupta, who was a teacher and who made me where I stand today, despite all odds and hardships she faced in bringing me up, and to my father Late Ved Parkash Gupta, whose benevolence I was deprived , in my childhood.

Jit Kumar Gupta
Chandigarh
Dated 30-07-2020

Jit Kumar Gupta
Yamini Gupta

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STRATEGIES AND OPTIONS FOR PROMOTING CONSERVATION OF BUILT HERITAGE IN THE INDIAN URBAN CONTEXT

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Jit Kumar Gupta
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STRATEGIES AND OPTIONS FOR PROMOTING CONSERVATION OF BUILT HERITAGE IN THE INDIAN URBAN CONTEXT

INTRODUCTION

Buildings have been integral part of human living and definers of growth and development of mankind right from inception. Human beings have been actively involved in creating different typologies of building for catering to their physical, social and economic needs besides improving their quality of life. Growth and development of communities and nations has been largely showcased by quality of buildings created by them. Buildings have also been acknowledged as the definers of urban fabric and structure, because they constitute large mass of the city. Accordingly, numerous iconic and theme based buildings have been planned, designed and constructed, locally and globally, in urban areas which are known for their state of art quality, structure, ambience, spaces and technology. These iconic buildings, created over a period of time, have now been recognized as the heritage of a place.

As reservoirs of skill and manpower, cities have been reckoned as drivers of growth and development besides generators of wealth. Cities are also major contributors to the economic health, social well being and quality of life prevailing in any area. Housing large iconic buildings, cities are also known to be repositories of cultural heritage, reflecting personality of a community. Heritage provides vital link between past and present and has also important role in defining and shaping the destiny of the community. These footprints of past, provide us vital knowledge about the culture, way of life, social fabric, level of development, building technologies, use of materials, art and architecture besides physical, social and economic edges of a society of a particular period. Accordingly, its careful and thoughtful conservation, preservation and management, assumes importance so that these repositories of knowledge, forming irreversible links between past and present, are not lost to the posterity in the dynamics of urban development.

Known globally, for having longest history of human habitation and civilization spanning over more than 5000 years, India as a nation, has been fortunate to inherit enormous wealth of built heritage. However, in the face of ever increasing urbanization coupled with enormous growth of population and physical expansion, built heritage located within urban areas has come under enormous pressure and threat. This threat is assuming alarming proportion due to lack of awareness about the role and importance of heritage besides constant neglect and misuse perpetuated over the built heritage, both by state, parastatal agencies, communities and people at large. This has lead to posing serious threat to the very existence of the valuable heritage and accordingly calls for evolving appropriate strategies and framework for action for its conservation and preservation.

ISSUES AND STRATEGIES

Heritage is known to have enormous capacity to build a strong urban identity and to create pride in our cities and towns. However, looking at the entire context of growth and development, it can be seen that value of heritage is not being understood and appreciated in the right earnest. Cities and built heritage are under a state of great stress due to existing pattern of haphazard, unplanned growth and development, Majority of vital heritage is being lost in the haze of uncontrolled development and growing greed of speculation and unauthorized construction.. Considering the role and importance of built heritage, it becomes important that these valuable assets should be rationally preserve and conserved. Target 11.4 under Sustainable Development Goal 11, defined by UNO has called upon all stakeholders to, 'strengthen efforts to protect and safeguard the world's cultural and natural heritage. Accordingly, it becomes important a well-defined, rational and objective policy framework for preserving the heritage is defined and made operational on priority. Any good heritage preservation policy has enormous potential and capacity to create large employment, leverage economy and alleviate poverty for any city and nation besides promoting preserving tangible and intangible cultures and achieving sustainability goals. Any effective policy framework for heritage conservation should invariably revolve around, defining and identifying heritage; looking at the local context where the heritage is located; legal framework defining the built heritage; bye-laws regulating the built form; master plan showcasing the growth and development of the city and heritage area; generating resources; involving communities and identifying nodal agencies for managing the heritage etc.

REDEFINING HERITAGE

Identifying right kind of heritage, understanding the value and need of preserving and conserving heritage assets, remains the most critical element of any effective heritage management policy. In order to ensure effective preservation and conservation, it is important that first of all efforts should be made to clearly identify and define what comprises the built heritage. At present entire process of identifying the heritage is done under the ambit of national and state laws enacted to protect it. Legal framework in the state of Punjab, defines built heritage in terms of;

- ***Any structure, erection or monuments or any tremulous or place of internment or monolith which is of historical, archaeological or artistic interest which has been in existence for not less than one hundred years.***

Looking at the above definition, heritage in the context of law must not only be of historical, archaeological or artistic value but should also have a life span of more than 100 years before it could qualify for protection and preservation as heritage. This excludes enormous wealth of built heritage created which has a life span of less than 100 years out of the purview of these Acts. Heritage includes objects, spaces, buildings which are of exceptional quality and merit which qualify to be preserved and conserved. Thus, in generic sense of the term, heritage cannot be solely linked to the time because time may be one of the elements but cannot be made the critical criteria to determine the value of any object. Accordingly, it calls for amending the definition so as to include the built heritage having less than 100 years of existence within the ambit of existing laws in order to ensure its preservation and conservation. In addition to the relooking at the definition of heritage, there is an urgent need of putting in place a set of detailed guidelines, norms, standards and criteria for evaluating buildings as heritage buildings, in order to bring

objectivity in evaluation, which would go a long way in facilitating the process of identifying the built heritage and its proper preservation and conservation.

Manmade heritage in the Indian context has narrow connotations, as it is only buildings specific. City spaces have been, by and large, marginalized in the legal framework. Thus in majority of cases individual buildings have been taken care of but city or urban spaces have been ignored. In order to preserve the sanctity of the historical buildings and to maintain the basic character of the area, it would be desirable to enlarge the scope and ambit of the legal framework by extending their operational areas to include urban spaces in additions to buildings. Incorporating concept of heritage cities or zones would go a long way in not only ensuring orderly growth and development of the area and buildings through conservation but also minimizing misuse and distortions which have been perpetuated on these areas by excluding them from the scope of the law. Accordingly walled cities, existing in large number of cities in India and forming their heart and soul, need to be declared as the Heritage Zone in order to preserve not only its valuable heritage but also ensure its comprehensive development.

REDEFINING URBAN PLANNING

Built heritage forms integral and vital part of urban fabric and its growth and development. Globally, large number of cities has reinvented themselves by building and emphasizing their historical roots and cultural assets. Accordingly, for rationalizing urban growth, heritage conservation and preservation of built heritage should be made integral part of city planning and development process. But in majority of cases, heritage conservation remains a subject of marginal importance in city planning and development process and legal framework governing its planning, development and management. In order to preserve urban heritage, it will be essential that town planning laws of the state are redefined to include urban heritage as major component of city growth and development. Punjab government amended in the year 2003, the Punjab Regional and Town Planning and Development Act, 1995, which provides for preparing Master plans for cities, Regional plans for the regions and Development schemes for parts of the city, to include heritage as an integral part of the development process but other major urban development laws like Punjab Municipal Corporation Act, Municipal Act, and Improvement Trust Act etc. are yet to be amended to include heritage as an essential ingredient of local development. Unless and until all urban related laws are amended to include heritage conservation and preservation as an integral part of planning, development and management process, it would be rather difficult to save our precious heritage.

In addition to amending the urban laws, effective and efficient heritage conservation would also require that our approach and intent of urban planning process should be redefined to include heritage as integral part of city planning and development process. Master Plans, which have been used by urban planners, as the panacea to overcome all urban ills and rationalize the growth and development of cities, in majority of cases accord low priority to heritage while defining strategies and agenda for growth and development of cities. At present, heritage conservations in urban areas, despite the existence of master plans is being carried out by proxy and in a piecemeal manner. Accordingly, intent, content and approach to preparing master plans need a critical review and redefinition for not only rationalizing urban development but also preserving and conserving its valuable heritage. In order to make these plans as instruments for heritage conservation, it would be important that Master Plans, Development Plans, Regional Plans,

District Plans or Metropolitan Area Plans evolved at the local, district or regional level must identify the areas of art, architecture, cultural and historical importance and also suggest appropriate strategies for preserving them. These plans must have an exclusive and dedicated agenda allocated to the heritage of the city so as to clearly identify the objects, areas to be preserved, problems faced in preserving the same and strategies suggested to ensure their proper preservation. Such an approach would go a long way not only in achieving the objective of effectively managing the built heritage but also restoring pride in the city and leveraging urban economy by generating employment and alleviating poverty.

In addition, if preparing the city development plans is supplemented with preparing a comprehensive and detailed plan of the core areas including the walled city(where existing) , it will help in not only restructuring the historic core and make it more vibrant but also overcome majority of urban problems. It will also restore and enhance the visibility of key heritage to bring about a holistic tourist experience and to promote tourism as an engine to bring resurgence and rejuvenation of the local economy. Heritage areas, if digitally mapped, using IT and IT enabled services, will help in not only creating accurate database but also help in evolving realistic strategies for their rational development and provision of appropriate services and infrastructures.

DESIGNATING A NODAL AGENCY

Conserving culture and securing heritage in cities have suffered largely due to multiplicity of planning and development agencies operating in the urban areas. These agencies including development authorities, improvement trusts, industrial corporations, housing development agencies etc have been found to be operating without any co-ordination and without any operational framework regarding preserving and promoting the urban heritage All these agencies have misused and abused the city and its resources including heritage, as a mechanism for generating money with little or no value addition made towards its planned development and preservation. In fact most of these agencies have operated in a manner, which has largely harmed valuable heritage of the city. In the given circumstances, for promoting orderly growth and to preserve heritage, it is essential that a nodal agency must be given the exclusive right, role and responsibility of managing cities and its heritage. It is impossible for a state level authority to take care of the city development and its heritage. Accordingly, for conserving the footprints of past, multiplicity of the development agencies operating at the city level would require elimination and removal, to be replaced by a local agency to look after the entire gamut and issue related to the rational planning and quality development of the city in a comprehensive manner.

In this context, urban local bodies, operating at the local level, for large number of years, offers the best option to fill the existing institutional gap. Local bodies, operating at local level having locally elected representatives as city fathers, can render an excellent service in the area of urban heritage conservation. This will also be in consonance of the letter and spirit of the 74th Constitutional Amendment Act, 1992, which mandates, urban local bodies to be made government at the local level, in their own right to manage the urban areas. Twelfth schedule, defining the functions to be given to urban local bodies also include conservation of heritage as one of the 18 functions included in the schedule. However, looking at the present context, urban local bodies don't have requisite capacity, capability, authority, resources and manpower to take up the onus and deal with nitty-gritty of the conservation of heritage. Urban local bodies would

require strengthening in terms of trained manpower particularly in the area of built heritage and fiscal resources to take care of the needs of the heritage conservation. Creation of a special and dedicated committee /cell for heritage conservation would go a long way in identifying and managing the city heritage. The heritage cell/committee must include eminent citizens having knowledge and expertise in heritage conservation. Inclusion of the academic institutions, industrial associations, and professional institutes like IIA, Institute of Engineers, NGOs and INTACH, will improve the effectiveness of the committee in managing the city heritage. In order to promote their efficacy and efficiency, urban local bodies should be vested with the role, responsibility, authority and power to regulate all issues related to orderly planning and development and heritage management with no exception permitted including state/ central agencies.

PREPARING DEVELOPMENT CONTROLS

The role of development controls, zoning regulations, building bye-laws is crucial in preservation and conservation the character and footprints of built heritage. Areas identified as built heritage would require innovative and state of art provisions for their development because of their specialized character. It may revolve round specifying provisions relating to eliminating misuse and specifying uses, use of materials, carrying out repairs, making additions and alterations which would not damage the basic character of the heritage buildings. Development Controls, etc. should be evolved with sensitivity, after careful and detailed study and must be commensurate with the special character of the area. However, in case of hardships to the owners/occupant of the buildings, appropriate incentives must be made available to ensure the conservation of buildings. Concept like Transfer of Development Rights (TDR) and exemption from property tax/ income tax etc can be made available in case of such buildings which require preservation etc. Large number of states in the country has already prepared heritage regulations which specifically deal with the planning, development and management of heritage areas. These regulations have added a new dimension to the development of such areas without compromising with the quality of buildings & spaces. Accordingly framing of Heritage Regulations, distinct from prevailing building by-laws, on the pattern of Hyderabad and Mumbai for the heritage buildings, areas and precincts would be critical in order to ensure that the basic fabric of these buildings and areas is not changed and essential architectural elements are not tempered with. Existing by-laws and urban laws applicable in majority of cities are not capable to respond to the challenges of heritage related issues and have caused more damage than good. They need to be amended on priority.

CONSTITUTING HERITAGE COMMISSION

The root cause of major maladies in preservation and conservation of manmade heritage in India has been the absence of proper system and rational approach to identify and manage the heritage. In the absence of proper machinery and mechanism to undertake the task, the entire approach to subject matter is both adhoc and subjective. It would be desirable to constitute “*Heritage Commissions*” at the centre and state and regional levels. However, as already said, setting up of a heritage conservation committee/cell at the local level, comprising of experts in the area of heritage conservation, engineering, architecture, urban design ,planning, environment, history,

sociology ,law, NGOs, INTACH etc. would be critical to identify the valuable heritage of the city and for aiding, assisting, advising the local authority on issues related to development, construction, conservation and preservation, framing of special development regulation for heritage areas etc. Heritage Committee should prepare *Heritage Atlas* containing heritage maps of the city and other details of such buildings and spaces, on the pattern followed in *Hyderabad city* in order to create awareness among the institutions, tourists and public at large. The task needs to be completed on a time bound basis in a phased manner. Heritage Committee must be provided with necessary technical, fiscal and trained manpower duly supported by the State Commission for scientifically completing the job. Creation of such Commissions/Committees would be a vital step in the direction of not only identifying but also effectively preserving and conserving the built heritage. Appropriate amendments needs to be made in the National and State Laws for the creation of such Commission/Committees and by defining their powers, role and functions in accomplishing the task. Appropriate supportive machinery at the regional and local level needs to be created to facilitate their task. In fact Heritage Commissions/Committees should work as fulcrum around which entire mechanism of conservation and preservation should gravitate. In addition, it is proposed that Heritage Cells must also be set up within the state departments of Town and Country Planning and Development Authorities in order to ensure that all development schemes/master plans do take cognizance of the heritage related issues as an integral part of the planning and development process.

USING LISTED BUILDINGS

In order to ensure the preservation and conservation of valuable manmade heritage it would be desirable to look at the concept of *listed buildings* followed in U.K. Under this concept, buildings of Architectural and Historical value, which require conservation and preservation, are identified at the city level. The onus of preservation and conservation of these buildings lies on the owners of such buildings. No structural or other changes, which impinge on the character of the building, are permitted unless prior permission of local bodies or competent authorities is sought and obtained. For making any change, owner has to apply to the concerned authority, which may be granted or refused after considering the individual merits of each case. Concept of *public hearing* followed in U.K. has played crucial role in promoting the cause of preservation and conservation of built heritage in the country. Concept of public hearing is based on the premise that heritage belongs to the community at large and not to the individual and accordingly its conservation and preservation should be community based. Concept of listed buildings has revolutionized the total concept of preservation and conservation of built heritage in U.K. Annually large number of buildings are being added to the list. Thus concept of listed buildings needs to be adopted in India also with appropriate modifications.

INVOLVING COMMUNITIES

Effective heritage conservation strategy must revolve around and involve active participation of local communities on all issues related to planning, development, implementation and management of heritage. Absence of an effective mechanism of involving communities/ public participation in the process has been the root-cause of damage and destruction of majority of valuable built heritage in India. Creation of heritage has its genesis in the efforts made by communities/society and accordingly onus of its preservation and conservation must also be

shared by it. It is said, honest inclusion of a community's representatives as "partners" in decision-making, ensures active citizen's participation and non-involvement of communities causes enormous loss/damage to heritage.

Constitution of India, under fundamental duties, prescribes protection of heritage as one of the important duty of each citizen but no effort has been made to make people aware of this duty. Efforts need to be made, to make preservation and conservation of heritage people centric by involving each and every citizen in conserving heritage. Heritage conservation must be made integral part of study curriculum of school/ higher studies, so as to imbibe the habit of conservation at the student stage. Architects and Planners have an important role cast for them in the area of heritage conservation. Accordingly, heritage conservation and preservation should be included as a compulsory subject of study in all Architectural and Planning Institutions This would sensitize all architects and planners during their process of education. Academic institutions involved with imparting education in architecture, planning and construction must also start courses leading to specialization in heritage conservation in order to create of pool of skilled manpower to deal with the issue. Valuable contributions can also be made by the Indian Institute of Architects, Institute of Town Planners, Institute of Engineers, institutions imparting education in art, architecture and planning, in the area of heritage, which should become role model for other institutions to emulate. Voluntary agencies, NGOs and pressure groups have important role cast for them in safeguarding and promoting the cause of built heritage. City authorities must bring out pamphlets, maps and brochures, highlighting the heritage of their cities so as to make people proud of it. This would help in creating competition among different settlements in the context of preserving its heritage and would help in achieving the end result. INTACH has done a commendable job in this area, creating awareness among masses and involving communities in the process. In Ahmadabad awareness has been created among the community through the mechanism of organizing *Heritage Marches and Heritage Exhibitions* at the city level.

Effective and comprehensive participation of the local community in heritage planning and implementation will help in maintaining continuous dialogue between the government and community, so that a coordinated/integrated approach can be affected, and conflicts resolved. It also helps in utilizing local resources to the best possible extent, and establishing a network where training and awareness building can take place. Community participation can be used to deal with micro issues, which usually suffer due to lack of focus and location-specific solutions. The mass media - print, electronic and online - play an important role in raising awareness, educating and involving the local communities on heritage issues and the value they represent for them. Seeking their active involvement in the heritage conservation action right from the beginning will ensure that the local community is informed and involved in the activities (Srinivas).

GENERATING RESOURCES

Major hiccups and roadblocks in conserving heritage in the urban context have been lack of availability of dedicated fiscal resources. In order to ensure that heritage remains for posterity, it will be desirable that *heritage fund* at the national/state/local levels is created on priority, so as to generate enough resources for the conservation and preservation of built heritage. Exempting

donations to the fund from taxation; levying cess on tourists visiting India, dedicating part of fee collected from visitors at historical; raising funds by organizing charity shows; earmarking part of budget of local bodies/development authorities; making heritage conservation part of CSR activities, starting a heritage lottery etc. can help in raising resources for the heritage conservation. Proceeds of the heritage fund should be used exclusively for promoting research and development in the area of conservation and preservation besides providing financial support for maintenance and upkeep of buildings listed as built heritage.

CONCLUSION

Built heritage is known be definer of art and architecture of a city showcasing its glorious past. Conserving built heritage helps in retaining the distinct identity of a community and preserving its old culture and accordingly calls for its careful and thoughtful, preservation for posterity. For preserving the built heritage it will be critical to put in place an innovative, people oriented and heritage focused policy. A good heritage conservation strategy should essentially revolve around having a urban/regional context; promoting settlement sustainability; involving historical, natural and cultural heritage; involving local community; making heritage conservation people centric; creating large pool of skilled heritage professionals; making heritage conservation integral part of urban development process; promoting employment, prosperity and alleviating poverty; generating resources for research, maintenance, repair and adaptation of heritage buildings and making heritage conservation integral part of education system, so as to ensure that substantial benefits of our built and cultural heritage can continue to be realized by present and future communities. Strategy should also identify the risks, challenges, or barriers facing heritage conservation and create appropriate opportunities to remove these road blocks in order to put heritage conservation on fast track for making city growth rational, productive and sustainable.

“A concerted effort to preserve our heritage is a vital link to our cultural, educational, aesthetic, inspirational and economic legacies – all of the things that quite literally make us who we are.” -
Steve Berry

ARCHITECTURE – A SYNTHESIS OF ART, CULTURE, CLIMATE & BELIEFS

Ar. J.K.GUPTA



Jit Kumar Gupta
Yamini Gupta

ARCHITECTURE – A SYNTHESIS OF ART, CULTURE, CLIMATE & BELIEFS

INTRODUCTION

Architecture, as an art and science, is visualized as mother of all arts besides the matrix of built form and human civilization. Every nation houses enormous wealth of architectural heritage acquired over a period of time. The heritage comprises of numerous buildings created over different periods by dynasties which make their footprints on the land. The built heritage is the outcome and synthesis of culture, traditions and beliefs of the people and advancement of building technology prevalent at that time. Heritage, known as the index of civilization and its mirror, reflects the aspirations, approach and achievements of a society. In majority of cases, major drivers of architecture have been the religion and its guiding principles. Creation of gigantic religious structures, laced with exquisite carving, inscriptions and decorations are the outcome of great faith, belief and commitment prevalent in the domain of religion and competency in the building design and construction. In the Indian context, it was the Islamic architecture which made enormous contribution to the Indian built heritage. It ushered a new era in the art and science of building industry through innovations and concepts which Islamic architecture brought and embedded in Indian architecture.

With history spanning over five century, Islamic architecture has left firm and distinct footprints on the Indian architecture. These footprints hold great relevance both locally and globally. The new architecture emerged under the patronage of Islamic rulers, had its outcome in juxta-positioning beliefs. The new paradigms in Indian architecture had its genesis in the synthesis of advance knowledge of building design and construction technique of Islamic master craftsmen and Indian art of construction, using stone as the raw material.

New order brought forth most beautiful structures despite the fact that they followed distinct ideals, beliefs and approach to life and religion. The common platform available was the firm belief in their religion, which led to the creation of structures glorifying God in all His manifestations. While Hinduism created buildings dedicated to religion and royalty, Islam created two distinct sets of buildings revolving around religion and secularism. Islamic period is credited with creating large number of beautiful structures within the available period of 500 years. Buildings created followed a distinct pattern and were the products of well defined principles. Approach was formal and materials used were diverse. Construction of buildings was



FIG. 1 TAJ MAHAL AGRA
SOURCE: (KVT, 2020)

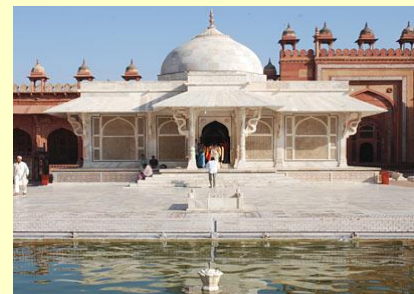


FIG. 2 DARGAH OF SALIM CHISTI, SIKRI
SOURCE: (WOOD, 2011)



FIG. 3 LAL QILA, DELHI
SOURCE: (INDIA, 2020)

dictated by new materials and new technologies. Making buildings grand in scope and style was the underlying principle of building design and construction. Building construction involved numerous elements which hold their relevance and importance even in the present context. Courtyards were used extensively as integral part of building design particularly dedicated to the religion where faithful could pray. Tombs defined a new regime of building vocabulary for commemorating the dead with the finest example of Taj Mahal.

Bringing in culture of arch and creation of domes redefined the skyline and overall profile of Indian buildings. Use of colored mosaic tiles and inscriptional writings made value addition and changed the exterior façade of the buildings. Love for nature and respects for local flora and fauna besides making nature integral part of buildings led to innovations in the art and science of landscape design. Focus on entrance led to the creation of new style of architecture which redefined the role and importance of approach to buildings. Accordingly, numerous designs for darwazas were put in place depending on the use, purpose and category of buildings it served. The construction was not limited in the domain of buildings only but also extended to planning and designing of cities. Thus town planning was given a new theme and distinct set of principles which defined the art and science of planning of towns based on site, orientation, climate, nature, zoning and security.

Considering the role and importance and contribution of Islamic architecture to Indian art and science of building design and construction , paper has tried to list few of the fundamental and critical elements of Islamic architecture which gave built environment a new theme, which hold great relevance even today. They have been detailed below in brief, based on the limited knowledge of rich and vast architectural vocabulary of Islamic architecture available in India.

HIGH RISE STRUCTURES

Islamic architecture has the distinction of introducing high rise structures in India for the first time in the 12th century, with the construction of Qutub Minar which stands 72.5 meters tall with diameter of 14.3m at the base and 2.7 m at the top. With 360 steps, Minar is the tallest free standing masonry structure in the world. Qutub Minar, the tower of victory, has been made possible through the combination of the inspired vision of Muslim rulers and creative genius of Indian craftsmen. Qutub Minar is the classical example of architecture and construction advancement of the period because it laid down and defined basic principles and approach to be followed in the construction of tall buildings including the manner in which load of structures should be transmitted to the ground and to make the structure safe from the impact of natural forces.

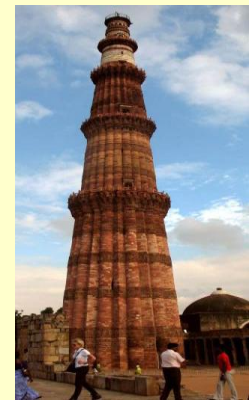


FIG. 4 QUTUB MINAR
SOURCE: (TNS, 2020)



FIG. 5 QUTUB MINAR
SOURCE: (TNS, 2020)

In the words of Satish Grover, *“Even after more than 800 years of buildings in Delhi and hundreds of architectural experiments, the Qutub Minar remains the most eye catching monument in the capital of Delhi.”*

The Minar is designed to give a look of verticality which is periodically broken by balconies projected at each floor with elaborate system of support. Each floor has a distinct character which provides new architectural theme to the Minar including unity in diversity. The lowest

floor has wedge shaped flanges alternating with rounded flutes, whereas the circular projections mark the second floor. The third floor has a star shaped pattern whereas fourth floor is simply rounded. All these combine to place the entire structure on a different pedestal. The most fascinating part of Minar is balconies and the manner in which they are supported and transmit their weight to the main structure. The magnificent inscriptions made have its role in making the Minar more distinct and distinguished.



FIG. 6 QUTUB MINAR
SOURCE: (TNS, 2020)

Looking at the entire context Percy Brown describes *“Qutub Minar as one of the most impressive conception, the vivid color of its red sandstone, the changing texture of its fluted stories, with their overlay of inscriptional bands, the contrast between the alternating spaces of plane masonry and rich carving, the shimmer of the shadow under the balconies, all combined produce an effect of marked vitality. The tapering cylindrical appearance purposely designed to give the entire structure an upward impulse and illusion of increased height with perhaps most pronounced quality of stability, absolute and immutable with decreasing shape, based on the principal of the*

pyramids in Egypt, illustrating that it was intended man’s highest endeavor to make the work timeless.”

LANDSCAPING

Making landscaping as an art and science and integral part of architecture/ built environment found its genesis in India during Islamic period. Buildings were never conceived in isolation. They were made integral part of site. Site selected to house the public/religious buildings were invariably large enough to accommodate other elements/features besides the buildings. Therefore entire design approach revolved around the planning of a complex in which buildings were strategically placed. Treating building as part of large complex helped in creating a fore court and side open spaces, a grand entrance and broad avenues from which glory of building could be fully appreciated by the



FIG. 7 SHALIMAR BAGH, SRINAGAR
SOURCE: (TTI, 2020)



FIG. 8 NISHAT BAGH, SRINAGAR
SOURCE: (JKI, 2020)

visitors. Thus buildings were conceived and positioned as the heart of a grand lush green area which was carefully designed and beautifully landscaped.

The art of landscaping during the Islamic period was invariably a symmetrical arrangement made around formal layout consisting of four quadrants i.e. Charbagh. The concept of landscaping had its genesis in the rulers having love for nature. The commitment to nature can be seen from the fact that it is said Firoz Shah Tughlaq is credited with creating 1200 gardens around Delhi during his regime. Starting from the conceptual frame work of garden

comprising of groves of trees, clusters of flowers and free flowing rivulets of water, the gardens were transformed into a refined manmade framework superimposed by geometrical patterns. Instead of trees forming a cluster they were dispersed and planted in rows and at strategic points to form avenues. Water was made to flow in rigid channels laid in the cardinal axis of building, punctuated by fountains at regular intervals. Rows of flowers formed the edges and flagged the path to become as decorative borders for the grass planted within the square quadrangles. Mughal gardens specified a new pattern and agenda in landscaping.

In addition to gardens forming integral part of buildings/tombs, landscaped gardens were also created over the strategic sites to include pleasure resorts. Sites chosen had enough availability of natural water supply besides flora and fauna. Water and manmade geometric pattern formed the basis of landscaping. Potential of the site was fully exploited in the design of gardens. Concept of terraced gardens was first introduced during Islamic period where undulating sites were designed as stepped gardens. Despite the fact, basic elements were same; each public garden had its distinct character. Squares, rectangles, octagons formed the basis to evolve new geometrical patterns in the gardens. Hard and soft surfaces were balanced delicately. Gardens were invariably enclosed with a high wall to maintain privacy, define the spaces and to give them a distinct identity. Layouts were dictated by rigid geometry and style belonging to school of formalists rather than naturalists with the prime aim of introducing a discipline. Art of landscaping found its culmination during the Mughal period in which gardens were created in a manner to capture nature in a manmade framework juxtaposing and highlighting the contrast between them.

Shalimar, Nishat Bagh in Kashmir, Shalimar Bagh in Lahore, Mughal Gardens at Pinjore and gardens forming part of Taj Mahal are the few of the classical and most valued examples of Islamic Architecture in the art of landscaping in India. Landscape Garden on the pattern of Mughal Gardens was also created within the residence of Governor General (now Rashtrapati Bhawan) in the designing of New Delhi in the pre-independence period during the British rule.

COURTYARDS



FIG. 11 JAMA MASJID, NEW DELHI
SOURCE: (DAFOS, 2007)

Considering the distinct advantage of courtyards, as providers of air, light and ventilation in the interior of buildings, as a place for assembly, place of undertaking social activities, space for maintaining the ambient temperature within the buildings and as connectors of buildings so created, courtyards have been extensively used during the Islamic period as integral part of various categories of buildings including cultural, residential, religious, institutional, etc.

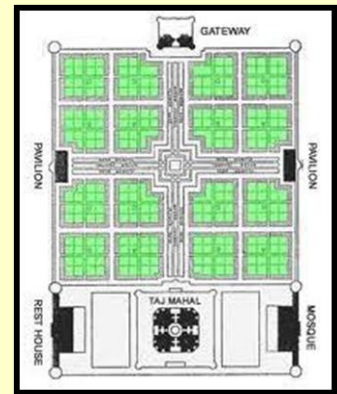


FIG. 9 PLAN OF TAJ MAHAL, AGRA
SOURCE: (PINTEREST, 2020)



FIG. 10 MUGHAL GARDEN, NEW DELHI
SOURCE: (BLAYNESLIFE, 2020)

The art of using courtyards as place of assembly was perfected in the designing of religious buildings (Jama Masjid), where courtyards were designed and used for facilitating assembly of people and offer prayers. Courtyards offered best options for allowing direct contact between worshippers, forming orderly aligned rows uninterrupted by columns, walls etc, sealing of prayer area from external noises/interruptions and opportunity of hearing the preacher with clarity. Accordingly, large courtyards were created, enclosed with colonnaded structures as integral part of mosque design. However, in number of cases, instead of one courtyard, number of colonnaded courtyards was added symmetrically, around the existing courtyard to enlarge the space and capacity of the mosque to accommodate more faithful.

In addition to using courtyards extensively in religious and secular buildings, courtyards also formed important part of houses. Considering the role of privacy and air, light and ventilation, inner courtyards emerged as the most important and valued element of residential buildings. Houses were generally designed with courtyard as the hub, around which the entire family life of the inhabitants gravitated.



FIG. 12 RESIDENCE

Courtyard also allowed interior doors and windows to open into it for improving air, light and ventilation in the house. Since the courtyards were largely protected from external air currents, it provided a valuable check on the infiltration of smoke, dust inside the house. Upper air current remained hovering over the courtyard and would only traverse, if cross ventilation was permitted by opening the front door of the house. Courtyards were also considered valuable during hot season, where they acted as areas of large heat dump. Introducing water features and using mechanism of cross-ventilation were discovered to have great potential in making the house cool through the courtyards. Critical role and importance of courtyards as an essential element of designing state of art and energy efficient buildings has been well appreciated and accepted in the parlance of modern architecture. Iconic buildings like India Habitat Centre, New Delhi, which has been constructed in the post-independence period, has made extensive use of courtyard as the most important part of building design.



FIG. 13 INDIA HABITAT CENTRE, NEW DELHI
SOURCE: (HUDCO, 2014)

ENTRANCE

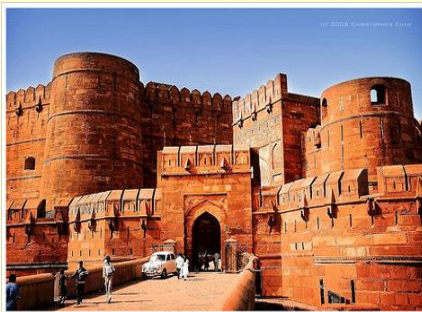
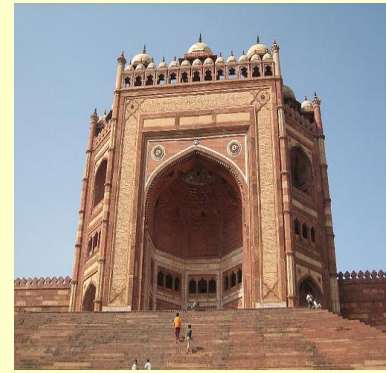


FIG. 14 ENTRANCE FORT AGRA
SOURCE: (GETTYIMAGES, 2020)

Islamic architecture has the distinction of viewing the important buildings not in isolation but as a balanced composition of number of buildings, dictated by principles of urban design. Besides placing various buildings in an array, which justify their utility and operational efficiency, these buildings were designed to be approached through a gateway, which itself was designed as integral part of the complex. Therefore, entrance to the complex became one of the most valued and critical element of design. Besides providing access, entrance was designed to showcase the glory and majesty of the complex. Entrances became ceremonial

gateway and were designed with great care and sensitivity matching the buildings inside the complex. The gates were not considered merely as architectural, engineering and structural elements but a unique solution of common problem of ceremonial gateway. It not only impressed the viewer but also evoked sensation of momentary shelter as he passed underneath it. In this process, entrance became critical element of overall design.

Buland Darwaja represents one of the classical examples of showcasing an entrance to the city of Fatehpur Sikri which related man to architectural power of gateway. The approach was made grand by elevating the structure to a height of 42 feet from the ground, approached through a grand flight of ever widening steps. Entrance is designed like a huge arch flanked by thin minarets and chamfered surface to highlight the verticality of the high portal. Arch is recessed and provided with openings to provide relief to the great façade. Light and shade generated by the recessed arch has given a new articulation to space enclosed by the entrance.



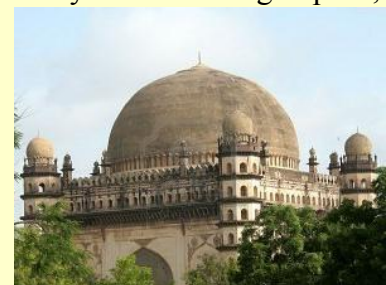
**FIG. 15 BULAND DARWAJA,
FATEHPUR SIKRI
SOURCE: (INDIANVISIT, 2020)**

Entrances were designed as a composition of solids and voids duly punctuated by bands created of stone and motifs, deeply recessed in order to give an impression of welcome and invitation to the entire complex. Structures were chamfered in order to provide adequate depth to the entrance which was again flanked by thin minarets. The chamfered surfaces were treated as highly balanced composition of solids and voids to enable interplay of light and shade. The solid and voids created a perfect balance and reduced the harshness of the solid surfaces and the materials which went into the making of structure.

As against a huge arch at the entrance, the chamfered surfaces had multiple arches to give a sense of number of stories and height of the structure and to break the structure into number of smaller elements. As against artistically carved out facades, the rear of gateway was made a plain, pile of stemmed down masonry in order to quietly merge it into the cloisters of the courtyard. The massive gateways were put in place to create a message that world is a bridge, pass over it, but build no houses upon it. The concept of grand entrance still finds high degree of importance and relevance in the present day architecture.

DOME

Dome for roofing in India was introduced for the first time by the Islamic architecture. Dome changed the profile of buildings from purely flat to vertical. Necessity to cover large spans, without any physical and visual barriers, to meet the basic needs of tombs and mosques, lead to the necessity of finding an alternate system of roofing. Flat roofing, prevalent in India, had the limitation of creating very small spans supported on the beams and brackets, which was incapable to cover large spaces. Since no mortar was used in the stone, construction of the buildings, accordingly covered spans remained relatively small. Large covered spaces invariably had number of columns to support, leading to repeated subdivision of space into smaller parcels. This lead to the creation of not only physical, but also visual



**FIG. 16 GOL GUMBAJ, BIJAPUR
SOURCE:
(DEPOSITPHOTOS, 2010)**

obstruction and creating numerous barriers in the optimization of space utilization. In order to overcome this limitation and handicap, concept of dome was brought in, and used extensively in the buildings under Islamic architecture. Design of dome underwent repeated review and revision, which made it more effective and efficient in terms of spanning large areas without any intermediate support.

Construction of domes had its genesis in the system of arches, which was also brought into India under Islamic Period. Arches were used to support the base of dome. Use of mortar with rubble masonry was for the first time used in India in covering spaces using dome as the roof. Domes are not only the product of architectural genius but also of structural marvel. Gol-Gumbaz in Bijapur is the classical example of highest level of perfection achieved in the domain of the construction of the large domes. With height spanning over 200 feet from the ground, hemispherical dome of Bijapur was constructed over the simple square of 136 feet. Circular dome supported by cube below, marks the phase of transition from cube to dome. Earlier the domes were supported by lintels places on series of arches created across the corner of the cube below depending on the size of dome. This method had the limitation of supporting only smaller spans and creating domes of smaller diameter. In order to overcome this problem in Gol-Gumbaz, Bijapur, system of **intersecting arches** was introduced which divided the square into a octagon over which a circular ring of the masonry, acting as the drum for construction of dome, was created.

Construction of dome also brought in and introduced new material and new construction technology, which also continued to be followed in subsequent period. Brick masonry cast in concrete formed out of a mix of ballast and rich lime mortar was used for the construction of dome. This formed a homogenous shell/mono blocks of virtual brick reinforced concrete. Bijapur dome covered the largest uninterrupted floor space in the world which is of the order of more than 18000 sq. ft. Evolution of dome however was the product of series of efforts made in the use of material and construction techniques which found its culmination, perfection and elegance in Taj Mahal at Agra. Domes still remain relevant and forms important part of Indian architecture besides a valuable method to cover the large spans. Domes have been used extensively as integral part of architectural vocabulary and shall continue to be used by architects to redefine and provide distinct shape, profile and personality to the building.



FIG. 17 RASHTRAPATI BHAWAN,
DELHI
SOURCE: (RAJVANSHI, 2010)

TOWN PLANNING

In addition to creating large number of religious and public buildings in India, Islamic period is also credited with construction of number of capital cities. These capital cities were created on virgin territory away from existing settlements. These cities were supposed to be self-contained in terms of meeting the basic needs of protection from invaders, defense, royal residences, public buildings and residences of royal army and support system. The cities were accordingly walled to protect the rulers and were never large. Site chosen was invariably strategic. Numbers of such cities were built within and outside Delhi during Islamic period. Fatehpur Sikri remains one of the most beautiful living examples of Islamic skill in the domain of planning of capital cities.

Over a period of time, the city planning underwent numerous changes in terms of location, planning and architectural elements. Earlier when the need of defense was more acute, the new towns sites in case of Delhi were located strategically on Aravali Hills, where site commanded strategic view of the adjoining areas. However when the requirements of defense were diluted, the cities were moved to new sites, away from Aravali and closer to the banks of Yamuna in the North, in order to ensure not only abundant supply of fresh air and water but also a serene and grand view of majestic Yamuna to the city and its residents. The tradition was followed in number of towns which was set up subsequently. Besides making a distinct choice of site, the planning of capital city was based on the principle that longer side should face the river which will provide enough options for location of the palace complex along the river for reason of safety and view.

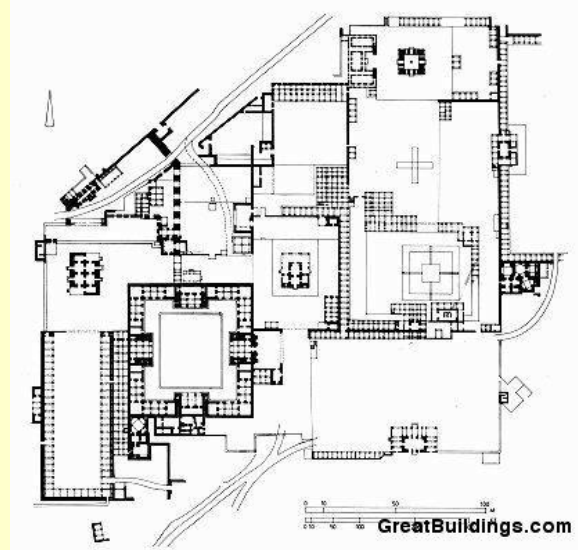


FIG. 18 PLAN OF FATEHPUR SIKRI

Entry to the city was placed on the opposite side of the river which had buildings directly dedicated to use of public which facilitated royalty-public interaction without interfering in the normal process of functioning of capital city.

Entire city was planned along a central axis with area divided into squares and rectangular courtyards which housed variety of structures juxtaposed in nature and gardens. Placing of buildings was done in a manner in order to enable the buildings to communicate with one another and not remain in isolation. The communication between the buildings was the outcome of planning the city on the principles of urban design. The entire planning revolved around Diwan-I-Khas, which was designed to be the heart of the city with all royal buildings placed on farther side along the river front duly protected by army barracks. Other structures were located on the opposite side with access limited to common public to the Diwan-I-Aam.

This in nutshell defined the basic framework which was followed in the planning of subsequent cities in Delhi.

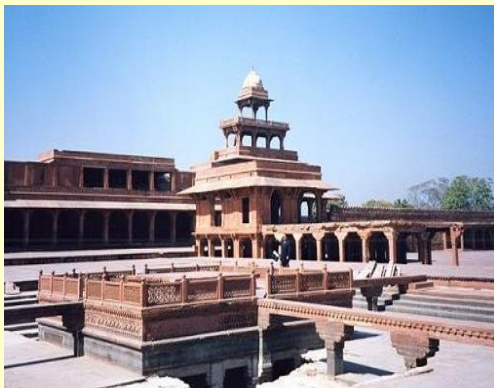


FIG. 19 PANCH MAHAL, FATEHPUR
SOURCE: (TROVER, 2018)

The culmination of town planning during the Islamic period can be found in the city of Fatehpur Sikri built by the Akbar on a site 26 miles west of Agra. Located on the rugged hills of Sikri, capital city was built and was said to house more than 2, 00,000 population at zenith- more than population of London and Rome at that time. The city comprised of great complexes of royalty, residential, official and religious buildings grouped to form one of the most spectacular complex.

The planning of Fatehpur Sikri was dictated largely by:

- Function, orientation, topography, security and aesthetics which guided the destiny of city.
- Flexible planning dictated by broad zoning.
- Absence of formal streets with arrangement of broad terraces and stately courtyards around which palaces and pavilions were grouped together.
- Absolute freedom to design the buildings under the overall framework of development controls.
- Service areas including waterworks, sarais etc located on outskirts.
- Public areas including courts, Jami Masjid etc grouped around king/queen residences. Most strategic location given to royal buildings.
- Rigid adherence to the orientation.
- Cardinal axis dictated the location of the buildings with secular buildings placed along north-south axis. Jami Masjid placed on west around east-west axis.
- Existing topography retained for reasons of economy and environmental considerations.
- Locally available material, i.e. sandstone used as the basic materials for construction of buildings.
- Sandstone building components cut as per standards and made available to the people/craftsman for rapid construction of buildings on the basis of pre-cast units.
- Building position determined in geometrical relationship, based on the system of multiple axis.

Conceptually Fatehpur Sikri put in place a new paradigm in city planning where streets became public spaces with buildings grouped around it. Normal hassles of traffic were avoided and city emerged as a pedestrian city. Its operational mechanism closely related to human scale, which made Fatehpur Sikri as the most humane and sustainable urban settlement. With flexibility being the guiding principle, a new concept was put in place for the rational planning and development of human settlements. Use of local materials with buildings design guided by the cardinal principles of functionality, orientation, topography and aesthetics to create sustainable buildings and cities find their relevance and importance even in the present day architectural and planning vocabulary. Art of planning and designing with site was perfected in the planning and development of the city. Fatehpur Sikri thus demonstrated a new vision, approach and conceptual framework in the art and science of town planning and architecture which was hitherto unknown.

CONCLUSION

Looking at the entire gamut, Islamic Architecture made rapid and enormous impact, hitherto unknown, in the parlance of built environment in India and contributed extensively to its growth and development. The glory, uniqueness, sensitivity and variety, which vernacular architecture has demonstrated in India can be largely attributed to the synthesis between Islamic and Hindu Architecture. Despite operating in an environment with different thoughts, ideas and approach, it gave a new theme, focus and expression to architecture in India. Decorative lettering pattern of wall surfaces in colored marble and glazed tiles were introduced for the first time in the Indian buildings during this period, which was primarily the period of formal approach adopted in building design and use of materials. Variety and diversity were introduced through innovative methods of construction and new building techniques. Art of constructing dome introduced to

bridge the large spans. Planning of towns and cities was given a new theme and put on a different pedestal, hitherto unknown. This pattern of Architecture is largely the outcome of techno-scientific and artistic creative principles of architecture and is primarily based on the organic relationship between people's need and their social and climatic environment. Accordingly, adopting natural ventilation, use of human skill, building forms dictated by building functions and ornamentation emerged as the basic principles of Islamic Architecture, holding great relevance and reverence even in the modern architecture.

For achieving order, beauty and harmony in buildings, Islamic Architecture made optimum use of close relationship between mathematics and architecture. It used proportions based on the ratio of $1:\sqrt{2}$ in the design of buildings. Accordingly, plan of buildings was largely made square and elevations were obtained by making projections from the diagonals of the plan. This method was also used in determining dimensions of the various horizontal and vertical components of buildings including projections, mouldings and cornices.

Considering the large variety of buildings constructed, innovations brought in building design; use of materials and construction technology, Islamic period can be labeled as the most fascinating, innovative and experimental in the art and science of architecture, landscaping and town planning. Its relevance will continue to define contours of Indian buildings and human settlements in the years to come.

This article is based on the valuable material available in the books on Indian Architecture (Islamic Period by Percy Brown and Islamic Architecture in India by Satish Grover), which is gratefully acknowledged.

Conservation is the process of maintaining and managing change to a heritage asset in a way that sustains and where appropriate enhances its significance. – Historic England

STRATEGY AND OPTIONS FOR PRESERVING INDIAN HERITAGE

Ar. J.K.GUPTA



Jit Kumar Gupta
Yamini Gupta

STRATEGY AND OPTIONS FOR PRESERVING INDIAN HERITAGE

ABSTRACT

With bountiful nature and unique civilization, having long and rich history spanning over 5000 years, India as a nation with wide range of social, cultural and physical diversity, has the unique distinction of inheriting large wealth of heritage, both natural and manmade. Known for its value as provider of vital link between past and the present showcasing the old glory, culture, economy and way of life of a society of a particular era, valuable heritage inherited by the nations needs to be recognised, valued, preserved, conserved and enhanced for both present and future generations. Universally, heritage is valued as definer of nature and building typologies, materials and the construction technologies used in creating built environment in different eras. Heritage is also known for its role in shaping the future and contributions it makes to depict the quality of life and cultural identity of a community. Accordingly, we have the onus and responsibility to identify and respect what is important, and pass on to future generations so that they understand what came before them. India, under the pressure of massive urbanisation; unplanned development; unauthorised construction; rapid expansion of human settlements; ever growing need for buildings to house people and institutions coupled with lack of awareness and commitment on the part of parastatal and local authorities, have lost most of its valuable heritage in the haze of, so called development. The historic environment, as a valuable asset, is known for its role in promoting economy; regenerating human settlements; developing culture, communities and promoting sustainability of settlements. Globally, many countries are known to have leveraged heritage to promote development and showcase their culture. With abundance of heritage, India needs to focus on evolving strategies to preserve, conserve and showcase its valuable asset for not only preserving its cultural wealth but also launching India on the fast track of physical, social and economic growth and development. In search for defining appropriate strategies, paper looks at the options of identification of heritage existing in India; making heritage integral part of planning process; community assisted mapping; developing partnership by involving communities; creating awareness and making heritage conservation people centric; Involving education and professional institutes; leveraging corporate sector and communities for resource generation besides capacity building of stakeholders.

Keywords: Heritage, community, asset mapping, resources, planning

INTRODUCTION

As a valuable asset, built and natural heritage is known to contribute and leverage the physical, social, economic development, employment, urban and rural regeneration, tourism, leisure and recreation, cultural and community development; good urban design and town planning; formal and informal education, development of skills, and sustainability of a community, state and country. India has a rich and



FIG. 20 HUMAYUN TOMB
SOURCE: (GUPTA, 2019)

varied historic environment. Heritage assets have an important role to play in connecting us with our past and also in shaping our future. With nature being bountiful and civilization having long and rich history spanning over 5000 years, India as a nation, with wide range of social, cultural and physical diversity, has the unique distinction of inheriting large wealth of heritage, both manmade and natural. The valuable heritage inherited needs to be recognised, valued, preserved, conserved and enhanced for both present and future generations because heritage is known for its value as provider of vital link between past and the present showcasing the old glory, culture, economy and way of life of a society of a particular era. Built heritage is also valued as definer of building typologies, materials and the construction technologies used in creating built environment in different era. Heritage is also known for its critical role in shaping our future and contribution it makes to depict the quality of life and cultural identity of communities. Heritage places also contribute to the quality of life and cultural identity of our communities. Many heritage places have emerged as the focal point for community gatherings. Privately-owned heritage places and heritage precincts contribute to streetscapes and our sense of belonging. A recent national survey showed that 92% of Australians value heritage as a core part of national identity. As a community, we share the responsibility to identify and respect what is important, and pass on these places to future generations so that they should understand what came before them. The retention and management of heritage places has an important role to play in protecting the environment; creating vibrant communities and sustaining local economies. Considering the role and

importance of heritage, its identification, preservation and conservation becomes critical. It calls for placing on priority appropriate strategy and framework of action for effective management of heritage.

MAKING HERITAGE PART OF PLANNING PROCESS

Heritage conservation does not find adequate focus in the urban planning process with the result majority of existing heritage, suffers from the malaise of unauthorised, haphazard and unplanned development. Effective heritage management would require that it should be made integral part of both short term and long term urban planning process. Accordingly, Master plans/ Development Plans prepared for urban settlements must carry out a detailed survey/ detailed study and in-depth analysis of, first identifying the heritage wealth falling in the urban, urbanisable and planning area, then preparing an inventory of heritage assets identified, before suggesting detailed strategies for effectively managing the same. In fact for effectively promoting the cause, one chapter in Master Plans must be dedicated to the heritage management of the city. Since each city remains unique in its fabric, structure, origin, growth and development, accordingly strategies defined shall be different and specific for the each city. In fact city economy, its growth and development needs to gravitate around valuing its heritage.



FIG. 21 ICOMOS SDG
SOURCE: (ICOMOS, 2017)

In large number of historical cities, heritage strategies have defined the growth agenda for such cities. Further, strategies defined in the Master Plan/ Development Plans should be achieved by framing detailed schemes for such areas. Core areas of the historic cities are known to possess enormous economic, physical, social and heritage values. Accordingly

detailed plans for the core areas need to be prepared for preserving the sanctity of such areas. These areas were planned for non- mechanised vehicles accordingly, focus of planning shall be to exclude the invasion of vehicles in the area. Planning strategies shall accordingly promote pedestrianisation and not vehicular movement. Core areas will be planned for people and not vehicles. Building bye-laws for these areas will have to be different and distinct, promoting the existing building vocabulary. Effort shall be made to enhance the quality of public spaces and creating environment to relive the history.

INVOLVING COMMUNITIES

Involving community remains central to the success of any policy, focussing on identification, preserving, protecting and promoting heritage. Since heritage is the creation of community, accordingly they are its legitimate owners. The 2006 Productivity Commission Inquiry Report into Conservation of Australia's Historic Heritage Places explains, ' that the community sees heritage as a "good thing to have". UNESCO's Declaration Concerning the Intentional Destruction of Cultural Heritage (2003), also explains that , heritage is an important component of the cultural identity of communities, groups, and individuals, and ... its intentional destruction may have adverse consequences, not just related to buildings and the physical landscape, but also to members of a community and their traditions and values.' Numerous options have been exercised, locally and globally, to involve communities in the process of conservation of heritage. Holding public meetings and making people part of discussions are known to be effective way of community consultation enabling people to become more involved in the process of heritage management. The process helps in making community feel that they are being 'listened to' and they have been given a 'voice'. As a result, it is often possible to build relationships that enable communities to become involved in conservation processes.



FIG. 22 INVOLVING COMMUNITIES

Numerous internal and external workshops and stakeholder's consultation carried out globally, have stressed the critical role played by communities as preservers and promoters of the heritage. This approach has proven that empowering the community and the local stakeholders is a key to ensure that community remains committed to conserve heritage as its primary guardians. Organizing *Heritage Marches and holding Heritage Exhibitions* at the city level has been acknowledged as effective options for creating awareness and involving communities in the process. Involving ward level committees has also helped in making communities, as guardians of the heritage. Organising competition among communities in the context of preserving its heritage would go a long way making communities guardians of its heritage. Using print media by bringing out leaflets, maps and brochures, highlighting the heritage of the area have also been recognised as the effective tools to involve communities. Using print and electronic media have proved its effectiveness in raising awareness, educating and involving the local communities on heritage issues and the value they represent for them. Effective heritage conservation strategy must revolve around and involve active participation of local communities on all issues related to planning, development, implementation and management of heritage. Absence of an effective mechanism of involving communities/ public participation in the process has been the root-cause of damage and destruction of majority of valuable built heritage in India. Creation of heritage has its genesis in the efforts made by communities/society and accordingly onus of its preservation and conservation must also be shared by it. It is said, honest inclusion of a community's representatives as "partners" in decision-making, ensures active citizen's participation and non-involvement of communities causes enormous loss/damage to heritage. Fundamental duties enshrined in the Constitution of India, also mandate the protection of heritage as one of the basic duty of every citizen of India, but no effort has been made to make people aware of this duty. Efforts need to be made, to make preservation and conservation of heritage people centric by involving each and every citizen. Making communities coparceners in heritage planning and implementation has helped in generating not only resources but also resolving numerous conflicts and conflicts. It has also helped in optimising local efforts besides creating networks for promoting awareness and relation building. Community participation has been recognised for its effectiveness in resolving local conflicts and dealing with micro issues besides providing location-specific solutions. Seeking their active involvement in the heritage conservation, right from the beginning will ensure that the local community is informed and involved in the activities. Involving students from local schools in the management of the heritage site and train local inhabitants as tour guides have been successfully tried in Slovenia.

COMMUNITY ASSET MAPPING

In order to preserve the heritage, it is essential that heritage must be recognised and included in the inventory created at local, state and national level. Most of the heritage is lost because it is not recognised by the agencies involved in the task. Non- recognition leads to its perpetual neglect and misuse with the result, it suffers irreparable damage. Accordingly, recognising and documenting heritage becomes critical for its preservation. Considering the vast length and breadth of the nation, it becomes difficult in most of the cases to identify



FIG. 23 COMMUNITY ASSET MAPPING

large reservoirs of heritage which exist at the local and regional level. Community Asset Mapping has been found to be a valuable mechanism to identify, document and creating inventorying of the assets of individuals and organizations, existing at local level. For identifying the local assets, it is critical to engage the community more actively. Process needs to be made more participatory so that ownership at community level is created for conservation of heritage for the benefit of all interest groups, or stakeholders. For mapping community assets, it will be essential to identify network of resources in the shape of deploying trained manpower equipped with adequate technologies, at the local level, who are appropriately trained in the art of identifying and documenting these assets. The identified assets are then sent at the regional level for close scrutiny before being listed as heritage. Such a mechanism will help in mapping assets at the local level and make enormous addition to the inventory of heritage and its subsequent preservation and conservation. The process needs to be made integral part of the policy framework of heritage conservation. Effectiveness and efficiency of the system will determine the future of heritage management at the local level.

INVOLVING ACADEMIC AND PROFESSIONAL INSTITUTIONS

Managing heritage has suffered because of lack of availability of appropriately trained manpower in the domain of heritage. Heritage as an area of specialization has been given low priority by the majority of institutions imparting education in architecture, planning and construction. Very few institutions in the country run specialised courses in heritage with the result available manpower is very less. Low availability of trained manpower has led to majority of heritage being lost and mismanaged in the country. Accordingly, it will be appropriate to increase the number of trained professionals in the country. Institutions imparting education can play a critical role in preserving heritage by making heritage integral part of study curriculum of school/ higher studies, so as to imbibe the habit of conservation at the student stage. Such institutions should run short term courses for the in-service and

professional working in the field of heritage, for creating awareness and capacity building in the field of heritage.



FIG. 24 INVOLVING ACADEMIC AND PROFESSIONAL INSTITUTIONS

Architects and Planners have an important role cast for them in the area of heritage conservation. Accordingly, heritage conservation and preservation should be included as a compulsory subject of study in all Architectural and Planning Institutions This would sensitize all architects and planners during their process of education about the role and importance of heritage in the art and science of planning settlements and designing built environment. Undergraduate and Master level courses focussing on heritage preservation and management need to be started in planning, architectural and engineering schools involved with imparting education in architecture, planning and construction to create of pool of skilled manpower to deal with the issue. Opening such courses in all the national level institutes including IIT's, SPA's and NIT's would help in making available appropriate level of manpower in the country. Valuable contributions can also be made by the professional institutes operating in the country including The Indian Institute of Architects, Institute of Town Planners and Institute of Engineers, in the area of heritage, which should become role model for other institutions to emulate. These institutions should work closely with state and local level agencies to promote the cause of heritage by holding seminars, workshops and symposia, by inviting experts to interact with officials and involving voluntary agencies. NGOs and pressure groups, who have also important role cast for them in safeguarding and promoting the cause of heritage.

CREATING HERITAGE FUND

Heritage management has always been considered a resource intensive activity. Heritage conservation has suffered enormously in the past, due to perpetual lack of resources available with parastatal agencies. Non- availability of dedicated and adequate fiscal resources has emerged as the major hiccup and roadblocks in conserving heritage in the urban context. For

preserving heritage rationally, it will be critical that a dedicated *heritage fund* at the national/state/local levels is created on priority, for generating and making available enough resources for conservation and preservation of heritage. Granting exemption from Income Tax for donations made to heritage fund; levying cess on tourists visiting India; dedicating part of fee collected from visitors at historical sites; raising funds by organizing charity shows exclusively for promotion of heritage; involving industries in maintenance and regular upkeep of monuments; earmarking part of the budget of state/local bodies/development authorities for heritage conservation ; making heritage conservation part of CSR activities of the Corporate sector ; involving communities and their resources; starting a heritage lottery, etc. can help in raising resources for the heritage conservation. Making heritage conservation integral part of all urban missions including Smart city etc and allocating dedicated funds in these missions will help in generating resources for the heritage management. Corpus of the heritage fund should be mandated to be used exclusively for promoting research and development in the area of conservation and preservation besides providing financial support for maintenance and upkeep of buildings listed as built heritage The development of heritage-based tourism and the empowerment of local artisans and craftsmen can help in generating resources and making cities self-sustaining, where revenue is both generated for the private individuals to fund the maintenance of historic buildings and for the city. Utilising and revitalising our heritage places can also assist local economies through employment opportunities and by generating additional revenue, particularly through tourism

CAPACITY BUILDING



FIG. 25 INVOLVING ACADEMIC AND PROFESSIONAL INSTITUTIONS

In order to promote effective heritage management, it will be critical to create appropriate capacity at the local, state and national level for Heritage conservation and management. Unless and until appropriate capacity building is ensured, heritage will continue to suffer perpetually. The World Heritage Capacity Building Strategy, adopted by the World Heritage Committee in 2011, advocated the role and importance of, making available appropriate literature, learning good practices, imparting hands on training, learning from case studies and communication tools as the activities foreseen, to be the strategy to improve these capacities; organize the cultural heritage; empower the local communities to become primary stakeholders and keepers of their tangible and intangible cultural heritage. State should promote focussed research and development and bring out appropriate literature with the support of academic institutions in the area of heritage. Adequate level of trained manpower needs to be inducted at local and state level agencies to put heritage conservation on the right track. Conducting training at the local level would help in making heritage conservation a distinct reality by using local resources. Housing Associations operating at local level need to be engaged through capacity building measures to enable them to have cost-effective repair and restore their houses that are compliant with conservation standards. The sustainability of conservation management lies in its ability and capacity to engage the local stakeholders – the owners of the heritage houses, teaching institutions, artists and craftsmen, and business owners to instil the value of their heritage.



FIG. 26 DCH
SOURCE: (DCH, 2015)

EVOLVING COMPREHENSIVE AND CONSERVATION HERITAGE STRATEGY

For effective and efficient heritage management, it will be essential, to evolve, and put in place on priority, a comprehensive and integrated Conservation and Heritage Strategy. Such a strategy should define the agenda and form the basis for conservation and heritage activities and establish principles to be followed. The focus of this strategy would include both manmade and natural heritage ; tangible and intangible assets besides recognising local distinctiveness and identity that gives distinct recognition to local cultural and local heritage besides advocating a holistic approach to its management ; creating partnership between the parastatal agencies, its partners and key stakeholders. Conservation and Heritage Strategy should stand on four distinct pillars of *Understanding, Positive Action, Developing Partnerships and Promoting Best Practices*. Good heritage conservation strategy should essentially revolve around;

- Creating a supportive and efficient legal framework for identification and conservation of heritage
- Making heritage management people centric by involving communities

- Promoting co-ordination and effective partnerships between different stakeholders
- Creating awareness and appreciation of the value of heritage assets through effective communication.
- Making heritage management integral part of the local planning and development process
- Providing incentives to help conserve and promote heritage places
- Promoting monitoring, review and reporting on the conservation of heritage values on regular basis.
- Organising exhibitions, conferences and workshops in support of the *conservation of Heritage* sites and creating mass awareness
- Evaluation of historic resources and integrating heritage buildings into economic development strategies.
- Leveraging heritage for promoting tourism, generating employment and reducing poverty.
- Promoting capacity building of the institutions involved in heritage planning, development and management.
- Promoting re-use of heritage buildings, for larger public use and community to make value addition and generate resources for its maintenance and upkeep.
- To promote best practice regarding preservation, conservation and management of heritage sites at local, regional and international level
- To develop existing and new audiences and learning initiatives and promote partnership working between public, private and voluntary sectors
- To promote positive action and develop initiatives that secure the future and ensure the preservation and enhancement of heritage assets
- To foster continued use, enjoyment and access to diverse historic assets and ensure it contributes positively to quality of life today and for future generations.
- Developing short, medium and long term targets within available resources for heritage conservation.
- Creating a dedicated fund for heritage management at local/ state and national level.
- Creating large reservoir/pool of trained manpower to look after the entire context of heritage conservation.
- Improving communication and developing partnerships with external groups to promote enhanced access to information and advice
- Making heritage integral part of the teaching- learning process by including heritage in the study curricula at school level and institutions of higher learning
- Making people believe that development and heritage are positively co-related for promoting economy and quality of life of the community
- Promoting participative governance by empowered local communities in the planning and implementation of programs and projects besides promoting vigilance of the heritage sites
- Creating local sense of ownership among communities by holding festivals and cultural events.

- Creating an efficiently operated comprehensive legal system of administration and interaction between the key partners.
- Making rational choices of combining, restoration, rehabilitation, and preservation for promoting valuable heritage.

*By identifying, protecting, conserving, presenting and transmitting to present and future generations irreplaceable cultural and natural heritage properties of Outstanding Universal Value (OUV), the World Heritage Convention, in itself, contributes significantly to sustainable development and the well being of people. At the same time, strengthening the three dimensions of sustainable development that are environmental sustainability, inclusive social development, and inclusive economic development, as well as the fostering of peace and security, may bring benefits to World Heritage properties and support their OUV, if carefully integrated within their conservation and management systems. --
Policy for the integration of a sustainable development perspective into the processes of the World Heritage Convention*

**PROMOTING SUSTAINABILITY OF AMRITSAR
METROPOLIS THROUGH REDFINING
MORPHOLOGY OF WALLED CITY**

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PROMOTING SUSTAINABILITY OF AMRITSAR METROPOLIS THROUGH REDEFINING MORPHOLOGY OF WALLED CITY

INTRODUCTION

Cities are integral part of human history. Their existence is synonymous with the growth and development of the homo--sapiens. Cities have existed as part of human history and would continue to exist till human beings last on this globe. Cities besides providing platform for living, working etc. have showcased and manifested human achievement of that particular era to which they belonged. Cities are known to be embodiment of high degree of concentration of activities, institutions, industry, infrastructures, and services etc which require large numbers of human beings to support and sustain them. Accordingly, cities have been places of concentration of power, centres of learning, centres of trade and commerce, healthcare, education, entertainment etc. Since cities represent power and authority, accordingly they command high degree of influence over economic, social, physical, political fabric and available resources of any area , state or nation. Due to concentration of people and activities, cities have emerged as major contributors to the national wealth and economy besides consumers of large resources. They are also generators of large employment and accordingly, are known as reservoirs of skill and knowledge. Looking at the entire framework of growth and development, dominance of cities has increased very rapidly during last five decades. The way cities are now growing in terms of population, physical dimensions and activities and with globalization guiding their economic growth, they are now assuming global dimensions having international implications.

In the emerging scenario of fast globalization of Indian economy, the role of urban centres in the economic regeneration of the country has assumed critical importance. Urban centres are known for their higher order of productivity and substantial contribution they make to the national wealth on year to year basis because urbanization is perceived both as a determinant and consequence of economic development. There have also been found to exist fairly close and positive co-relationship between a country's level of development and the urbanization index. Contribution of urban India to net domestic product in 1950-51 was merely of the order of 29% when level of urbanization was placed at 17.29%. It grew to 37% by 1970-71 when urbanization level recorded was 19.91%. By 1990-91, contribution of urban India was placed at 50% when urbanization stood at 25.72%. With urbanization level of 31.16%, the contribution of urban India to GDP has grown to 60% in 2011. Accordingly, economic well being of the country clearly hinges on the productivity of urban settlements.

Despite numerous positive aspects of urbanization, Gallion says, cities have many faults when it comes to their services to the people. They can be overcrowded, contain large amount of sub-standard housing, be centers of large unemployment, have corrupt and inefficient governments, have high rates of taxation, render services and infrastructures less than adequate, promote wider disparity between 'haves' and 'have-nots', perpetuate worst kinds of living conditions on majority of its residents and become centers of concentrated poverty. Looking in the Indian context, one clearly observes a pattern where bigger cities are growing faster than smaller towns.

They are housing larger proportion of poverty and slums. With high degree of positive correlation found between the population in slums and size of the city, slums have essentially emerged as the symbol of urban poverty and an important place of the living and working of urban poor. But even with those limitations and faults, cities are here to stay and would continue to grow rapidly with larger number of poor being added to the city. Challenge is how to make our cities work better, operate efficiently and make them more desirable places to live and work for both rich and poor.

Over the years urbanization process has come under severe criticism because of the failure of the governments to effectively cope with its adverse impact to meet the basic needs of land, shelter, services, and infrastructures for the growing urban population. But looking at the entire process of urbanization it can be safely concluded that it is not the urban growth itself which is causing problems, but the scale and rate of growth of urban population which outpaces the institutional, administrative and financial capacities to cope with it. The need is to meet the challenges without wasting resources or distorting the pattern of national development.

Urban areas in the past have not received much attention in terms of their planning, development and management despite the fact that cities and economic development are inextricably linked. Because of high productivity of urban areas, economic development activities get located in cities. Accordingly, it is desirable that human settlements are provided with necessary planning and development inputs so that their orderly growth and development is ensured. This would also be necessary for ensuring efficient functioning of human settlements, for improving their productivity and for providing desirable quality of life to its residents in order to cater to their economic, physical and meta-physical needs.

In order to enable urban centres to act as generators of wealth, engines of economic growth and physical development, appropriate strategies will have to be evolved which would minimize and dilute the operation of all negative forces. In addition, mechanism to effectively channelize developmental forces to urban centres will have also to be put in place on priority so that urban centres are able to play their designated role in the economic emancipation of the state and the nation. For maintaining, augmenting and reinforcing the productivity of urban areas and enabling them to provide appropriate quality of life to its residents, it will be critical to create a supportive environment which would attract investment, allow trade and commerce to expand and make the market for infrastructure, services and land efficient.

STATE OF PUNJAB

State of Punjab represents a unique example of a fast developing economy based on agriculture, despite all physical and developmental odds. State is credited for ushering in the green and white revolution in the country. It today contributes nearly 40% of the wheat and 60% of rice procured for distribution through the public distribution system. An agro-based and agro-oriented industrialization is another prominent feature of the state economy. No less commendable are the efforts to strengthen the infrastructure, particularly irrigation and power. The cumulative effect of all this is manifested in the high per capita income of the state, a position which Punjab has been holding for most of the years since its formation in 1966.

Development in the state of Punjab is the outcome of the interplay of a variety of factors including political, economic, demographic and geographic. Being a border state, both external and internal changes have influenced the path of development. Historically, Punjab has experienced many upheavals and turmoil, which, in turn, have influenced its path of development. The contours of administrative map of Punjab have undergone extraordinary changes in the past. The nomenclature 'Punjab' was widely used during the reign of Akbar (A.D. 1556-1605). It was known as the Kingdom of Lahore during the reign of Ranjit Singh (1700-1839). The British occupied it in 1849 and merged Delhi and the Hissar division of the former Northwest Province (now Uttar Pradesh) with Punjab in 1858. In 1901, Punjab's border districts situated across the Indus were taken away, to form the Northwest Frontier Province. Later Delhi territory was also separated from Punjab.

At the time of the partition of the Indian sub-continent in 1947, Punjab was bifurcated into two parts with West Punjab going to Pakistan and East Punjab remaining with India. Of its 3, 59,179 square kilometers of area and 29 districts, only 1, 52,649 square kilometers and 13 districts were left with Indian Punjab. When two Punjab's were partitioned on religious grounds, most prosperous and developed western part went to Pakistan and the relatively backward eastern part remained in India.

Post-partitioned Punjab was faced with numerous problems and challenges including lack of the infrastructure necessary to accommodate 40 lakh displaced persons who migrated to India in the wake of partition. Migrants were put in temporary refugee camps, institutions and other available structures in insanitary conditions. The immediate task was to create appropriate infrastructure to accommodate the migrant population and to provide them opportunities for living and employment. This led to construction of number of new towns besides launching economic projects which were initiated for the resettlement of refugees from rural areas. The development pattern established during the period has continued to guide the path of growth and development in the state.

In 1956, at the time of the reorganization of states on linguistic basis, the former PEPSU territory was merged with Punjab. In 1966, the state was further reorganized under the Reorganization Act 1966. There was a strong demand for the reorganization of the state on a linguistic basis so that satisfaction of regional sentiments could be harmonized with the process of development. The Punjabi speaking areas were carved out of the erstwhile Punjab on November 1, 1966. The Hindi speaking and hill areas in the north were merged with Himachal Pradesh. The southern Hindi speaking areas were constituted into a new state of Haryana. After the reorganization, Punjab became linguistically homogeneous and structurally compact. The Punjabi speaking state created in 1966 was left with 11 districts, including Rupnagar. The reorganization reduced Punjab to about two-fifths of the size attained after the merger of PEPSU in 1956. This was one-seventh the area of Punjab before Independence (Kant, S., 1988). The state now is a linguistic unit inhabited by Punjabi speaking people.

At the zero hours of 1st March, 2011, when India as a nation became population billionaire plus, population of the state of Punjab stood at 2,77,04,276 persons of which 1,74,16,840 resided in 12,729 villages and 1,03,87,436 persons in 217 urban settlements. Accordingly 37.49% people live in urban centers whereas rural population accounts for 62.51%. In other words every third

persons of the state is urban dwellers whereas rest live in villages. This compares favorably with national scenario where 31.16% population is urbanite. Punjab, among states, ranks 8th in the country in term of urbanization. However, Punjab constitutes only 1.53% of geographical area of India whereas it houses 2.37% of the country's population. In terms of size of population, Punjab with a population of 27.70 million is bigger than 150 countries of the world. Even Amritsar district alone is bigger than at least 75 countries of the world.

During last six decades (1951-2011), total population of the state increased merely three times whereas urban population growth rate recorded was around 550%. First time in 2011, state recorded more than 10 million populations living in the urban areas. During the said period number of urban settlements became double with their number increasing from 110 in 1951 to 217 in 2011. State recorded highest addition to number of towns during the last decade (2001-1011) when their number went up from 157 to 217. Urban population growth was also marked by rapid growth of slums with one out of every seven persons in urban areas was recorded to be the resident of slums. The existence of large urban slum population indicates pressure on the urban infrastructure and poor quality of life existing in the urban areas. Urbanization in the state is expected to increase at a rapid pace due to economic reforms and industrial growth. This would put greater stress on the urban infrastructure.

AMRITSAR

Amritsar, the fulcrum of Sikhism one of the four religions born in India and one of the youngest world religion, as a city has the distinction of being considered holiest among the holy places for the 40 million Sikhs, Sindhi and Punjabis living within and outside India and ranked at par with Jeddah for Muslims, the Vatican in Rome for the Catholics, Jerusalem for the Jews, Lumbini and Sarnath (India) for the Buddhists. With history spanning over 436 years, Amritsar has emerged as the premier city of the state of Punjab. Amritsar is known not only as economic but also religious and political capital of the state. City of Golden Temple, also symbolizes the spiritual heritage of the people of Punjab. Presence of Golden Temple and Jallianwala Bagh has given a unique place to this dynamic and vibrant city of Amritsar in the history of the state and the nation.

SWOT ANALYSIS

Historically settlements positioned on hostile international boundaries invariably suffer from perpetual neglect and lower level of investment and development. With redrawing the boundaries in 1947, the geographical mosaic of India in general and state of Punjab in particular underwent drastic transformation. From a central location in North West India, Punjab became a border state. In the process, Amritsar lost its prime position and emerged as a border settlement. Partition of the country caused enormous damage to this historical city of promise. With its role as economic capital getting diluted, city gradually lost its premier position to Ludhiana where major industrialized growth got localized. With low investment made in the city over a period of time, its edge in the area of employment and economy generation also got blunted.

Based on analytical study of the journey made in the realm of growth and development during last four centuries of its existence, a SWOT analysis has been carried out for the city of

Amritsar illustrating its inherent strength and weakness, opportunities offered and threats faced by the city, both from within and outside, which has been used as a framework for redefining the agenda for future growth and development of the city.

STRENGTH

The strength of Amritsar Metropolis can be defined in term of:

- Premier urban centre of the state having historical significance.
- Rail and road gateway to the country for flow of goods and passenger traffic.
- High degree of rail and road connectivity with all major destinations of the country.
- Religious capital of the state- having Golden Temple and Durgiana Mandir
- Political Capital of the State.
- Cultural and Historical magnet of international significance.
- Tourist destination for both national and international visitors.
- City of enormous heritage wealth.
- Regional destination and prime distribution centre for goods and services for large number of surrounding urban & rural settlements.
- Hub of quality medical-cum-educational facilities of regional significance.
- Textile hub of northern India.
- Provider of high degree of air connectivity through international airport.
- House of well known Indian food delicacies.
- One of the most vibrant 53 metropolitan centres of the country.
- Highly diversified economy providing city with considerable buoyancy.
- Housing great local skill and entrepreneurship having minimum impact on economic cycles.
- Major generator of employment in manufacturing, trade and commerce.

WEAKNESSES

The city of Amritsar has also number of weaknesses which can be enumerated in terms of:

- Border settlement with a track record of perpetual threat from hostile neighbor.
- Low level of investment, both by parastatal agencies and private sector.
- City growth largely marked by haphazard, unplanned and unauthorized development.
- Multiplicity of planning and development agencies operating with overlapping areas of operation and functions.
- City development marked by extreme congestion in the core and sporadic development on the periphery.
- Overcrowding of buildings on land and people in buildings within walled city.
- Large scale unauthorized and unplanned sub-division of land and buildings within walled city.
- Poor road geometry and inadequate capacity of road network.
- Extreme vehicular congestion and absence of parking within and outside the core area of the city.
- Location of major rail and road network in close proximity crossing each other within the city causing traffic holdup and bottlenecks.
- Mushrooming of unplanned and unauthorized colonies.

- Acute shortage of housing, both qualitatively and quantitatively.
- Mushrooming of large number of slums.
- Absence of adequate infrastructure, facilities and amenities.
- Inadequate supply of serviced land to meet the emerging market demand.
- Absence of tourism related quality infrastructure.
- Existence of non-conforming land uses on large scale
- Large mix of industrial, healthcare, commercial and residential areas
- Absence of adequate open spaces within the core area with large number of open spaces converted into urban uses.
- High degree of road congestion caused by intermediate mode of transport.
- Lack of appropriate focus on conserving and preserving the valuable heritage.
- Low level of storm water drainage, sewerage treatment and poor solid waste management.
- High degree of environmental pollution caused by industry and Kerosene used as a fuel by the Autos.
- High degree of visual pollution caused by uncontrolled hoardings

OPPORTUNITIES

With the softening of border and improved relationship with Pakistan, the city of hope and joy is likely to offer enormous opportunities in terms of:

- Becoming major international trade and commodity export centre, both by land and air, for Pakistan, Afghanistan, Iran and other European countries.
- Attracting large investment and generating considerable employment.
- Reinforcing its prime position as major tourist destination with increased flow of tourists, both from within and outside India.
- Regaining premier position and becoming the financial capital of the State of Punjab.
- Becoming air cargo hub for northern India.
- Major growth centre and hub of value added and agro based food processing industries catering to demand of neighboring countries.
- Regaining premier position of the largest urban centre of the state through rapid economic and population growth.
- Rapid physical growth and expansion of city in all radial directions particularly along the G.T. Road towards Lahore/Pakistan and the Amritsar International Airport.
- Large demand for quality infrastructure in terms of education, health, tourism, trade & commerce, entertainment, housing etc.
- Major collection and distribution centre for goods, commodities and services of the Northern region
- Leveraging reforms and resources for the growth and development of the city with inclusion as one of the 63 mission city under Jawaharlal Nehru National Urban Renewal Mission
- Leveraging on heritage with likelihood of designation as World Heritage City

THREATS

Despite inherent strength, existing weaknesses, available opportunities, city faces numerous threats which can be quantified in terms of:

- Change in the existing Geo-political goodwill scenario leading to emergence of a hostile threat perception from the neighboring countries.
- Low level of investment by State and parastatal agencies in basic infrastructure.
- Absence of enabling environment for leveraging the involvement of private sector.
- Poor implementation of Master Plan leading to high degree of unplanned and haphazard development.
- Delay in putting in place an effective and efficient mechanism of urban governance to check unorganized and sub-standard development.
- Delay in placing appropriate framework for proper, preservation and conservation of valuable built heritage.
- Non-rationalization of inter and intra-city traffic and improving/upgrading transportation network.
- Delay in creating appropriate infrastructures related to tourism, trade & commerce.
- Delay in decongesting the city core (walled city) and rationalizing its growth and development.
- Delay in bridging the existing gaps in basic infrastructures and services in and around the city.
- Delay in addressing issues on priority related to slums, environment and urban poverty

WALLED CITY: AMRITSAR

With growth and development revolving around the Harimandir Sahib, Amritsar Walled City grew in an organic manner radiating in all directions. Rapid growth of Amritsar was witnessed during the period of Sikh *misl*s in the later half of 18th century when the city was almost rebuilt. Harimandir Sahib was reconstructed with the holy tank and parikarma. In addition, bungas, katras, bazaars, forts, gardens, tanks and havellies came up in large number as constituents of the expanding city. Major contributions to the city built heritage came from Maharaja Ranjit Singh, greatest builder of his time, in the shape of several structures created during his regime. Encircling his summer capital with a masonry wall having 240 watch towers and 12 beautiful gates to safeguard the city from invaders was the most beautiful structure created in Amritsar city, majority of which got lost after the annexation of Punjab by British. Gobindgarh Fort built at the behest of Jaswant Rao Holkar as his additional treasury was another monument constructed by Maharaja on a commanding site to defend the city. The fort constructed in brick and lime having



FIG. 27 HARMINDER SAHIB
SOURCE: (HINDU-TEMPLES.COM, 2019)

number of bastions, majestic iron gates and several canons placed on the ramparts still exists with most of its glory lost due to perpetual and constant neglect. In addition to these structures, Maharaja also created Rambagh, a beautiful garden spread over an area of 84 acres on the pattern of Shalimar Garden of Lahore. Following the example of Maharaja, his courtiers also built 25 gardens spread all over the city including Bagh Akalian, Bagh Teja Singh, Bagh Rama Nand etc.

Walled city occupies the most important place in the history of Amritsar where the fourth Guru Ram Das Ji constructed the sacred Golden Temple. It has a history spanning 436 years and is



FIG. 28 WALLED CITY 1849
SOURCE: (PUDA, 2010)

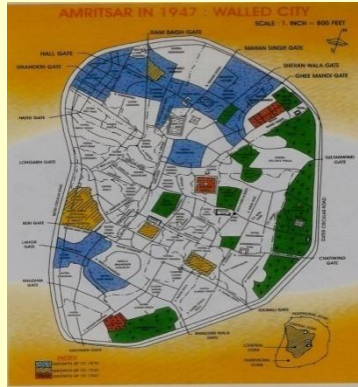


FIG. 29 WALLED CITY 1927
SOURCE: (PUDA, 2010)

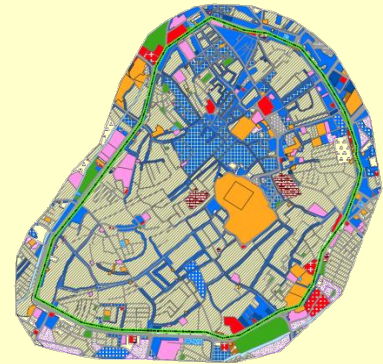


FIG. 30 WALLED CITY 2010
SOURCE: (PUDA, 2010)

marked by the presence of historical buildings. The origin of the walled city dates back to the sixteenth century. It had traditional spaces like streets, squares and common courtyards. The architectural style, materials used for different purposes in different ways, like woodcarvings, *jali* work, etc. reflect the high level of craftsmanship. The narrow winding streets with squares, buildings with domes and chattris indicate the influence of Islamic Architecture and Rajputana style. The walled city was built on a human scale with narrow zigzag street pattern which is a typical medieval planning concept meant for pedestrian movement.

The walled city of Amritsar has a rich heritage in the form of historical buildings/areas, gardens, artifacts, townscape and streetscape. However, with the changing life styles and priorities of the living community all are in state of neglect. The threats posed to these areas and buildings are misuse, alteration in the architectural fabric, etc. with little effort made to preserve them. The walled city requires major efforts to preserve its basic character.



FIG. 31 BUILDING
SOURCE: (PUDA, 2010)

WALLED CITY SUFFERS FROM:

- i) High degree of population congestion.
- ii) High degree of obsolescence of buildings.
- iii) Massive unauthorized and sub-standard development.
- iv) Large scale unauthorized sub-division of land.
- v) Massive conversion of land use.
- vi) Rapid uncontrolled commercialization of city.

- vii) Invasion of walled city by informal sector.
- viii) High degree of traffic congestion.
- ix) Inadequate parking
- x) Major road space consumed by road side parking.
- xi) Uncontrolled growth of vehicles
- xii) Plying of large number of cycle rickshaws and three wheelers.
- xiii) High degree of environmental/vehicular pollution.
- xiv) Large scale encroachment of public spaces.
- xv) Absence of adequate open spaces
- xvi) lack of basic infrastructure/services and poor quality of life.
- xvii) High degree of visual pollution due to unorganized large display of advertisement panels.
- xviii) Mushrooming of electric/telecommunication network services on roads & buildings.
- xix) Poor air, light & ventilation in majority of buildings.
- xx) Uncontrolled height & area coverage by buildings.

AGENDA FOR ACTION

Growing from a small village, Guru-Ka-Chak/Chak Guru Ram Das, focal point of Sikh faith, rightly called Sifti da Ghar (the Home of all Virtues), Amritsar today enjoys the status of a metropolitan city with population spanning over one million. Commanding a central position in North-Western India and gateway to the Middle-East, Amritsar enjoyed the status of a thriving trade centre in the Region in pre-independence era. However, post-independence scenario, emerging from partition of the country, made the premier city of the state as the border town, adversely impacting its economy, trade, commerce and population in numerous ways. It is said that more than 1/4th of the total buildings were damaged/destroyed during riots in the 1947 at the partition of India. Accordingly Amritsar has suffered enormously due to its positioning on the border and hostile neighbours. Despite all hostility, city has not lost its grandeur, culture and position of power in the state. Being the home of Golden Temple and Jallianwala Bagh it attracts large number of visitors on regular basis. Amritsar has always occupied a prominent place on the visitors list, both of dignitaries and ordinary mortals. It has emerged as an important tourist destination. Walled city with 12 gates has always been full of life with a typical culture of business and living. Considering the existing scenario of Amritsar, there are large number of issues which are impinging on not only the rational growth of the city but also adversely impacting the heritage buildings and areas surrounding them.

Walled city has a total area of 350 hectares, which constitutes merely 2.4 percent of the area of the Amritsar city. It houses approximately 16.6% of the population of the city. However, the Walled City, Amritsar has a unique quality of life, living pattern, growth and development. It has the distinction of housing the major cultural and religious landmarks. In addition, it is also the hub of trade and commerce and symbol of Amritsar glory. Accordingly, Walled City has been considered as the heart and soul of the city and hub around which entire social and economic fabric has been woven. Considering the historicity of the area, due to the presence of Golden Temple, Jallianwala Bagh, Katras, Bungas, Havelis of historical times, narrow streets and specialized markets, the area needs to be preserved, conserved and up-graded in order to make it a cultural hub of Amritsar. Considering the inherent strength and value of walled city as the

symbol of physical, social, economic and historical growth, it is proposed that walled city should be developed to preserve the existing rich heritage. Accordingly, following strategies are proposed for the walled city of Amritsar:

- To preserve, enhance and promote the basic character of the Walled City
- To promote quality of life by improving, upgrading and providing state of art infrastructure and services.
- To undertake selective de-congestion of the walled city by shifting of wholesale and bulk material markets, to identified planned areas outside the Walled City along the major road and rail networks.
- To promote de-congestion by eliminating sub-division of land and change of land use from residential to commercial and others.
- To promote revitalization of walled city area by way of conservative surgery.
- To frame detailed “Urban Design Guidelines” for promoting and enhancing the quality of urban spaces.
- Shifting of the Goldsmiths market in order to minimize the damage caused to the “Golden Temple”
- To promote conservation and preservation of heritage buildings
- Provision/ Up-gradation of higher level of urban and tourist infrastructure
- To promote, preserve, enhance and augment the bazaar culture in the walled city in order to make it a role model of urban heritage.
- To eliminate vehicular pollution by promoting electric based/non-polluting mass transportation system.
- To pedestrianise the walled city in order to eliminate the traffic problems.
- To promote pedestrianisation by replacing metalled roads by special walkways-- on the stretch from Chowk Phowara to Golden Temple.
- To identify, create and develop available open spaces through proper landscaping within walled city.

Master Plan for Walled City

Considering the critical role, historical importance and typical character of the walled city, it is proposed that it should be developed as a distinct entity. Accordingly, a specific, exclusive and detailed plan for the development of walled city needs to be prepared. The plan should be based on the prime consideration of having focus on Urban Design, pedestrianisation, provision of quality infrastructure and Heritage conservation & preservation. Such a plan would be critical in order to preserve, promote and enhance the religious, cultural and commercial ambiance of the walled city besides improving quality of life and productivity of Amritsar Metropolis. The preparation of urban design/heritage development plan for the walled city needs to be taken up on priority on the pattern followed for the preparation of Development Plan of Char Minar area of Hyderabad. Already large number of development projects has been/ being taken up for the development of walled city by various parastatal agencies without any integration and without considering their impact on the ambiance and character of the walled city. It will be critical to integrate all these projects within a well-defined framework. Accordingly, preparation of such a Development Plan for walled city assumes importance considering the huge amount of investment and number of development projects being taken up in the walled city in isolation.

HERITAGE ZONE

In addition to regulating and rationalizing the development of walled city of Amritsar, it will be appropriate to focus on the development of area around Golden Temple and Jallianwala Bagh, which forms the very heart and soul of Amritsar and around which entire future growth and development of the metropolis would gravitate. However, it has been observed that the areas around these icons are undergoing rapid change in terms of the development and architectural vocabulary. The old buildings are being demolished and new ones are constructed on such sites. The new construction does not gel with the existing pattern of development and are fast emerging as eye-sores. Pattern of designing is not based on the vernacular architecture. Majority of buildings constructed are largely in concrete and glass. At other places, brick facades are being replaced by glass facades changing the culture, look and ambience of the area/buildings.

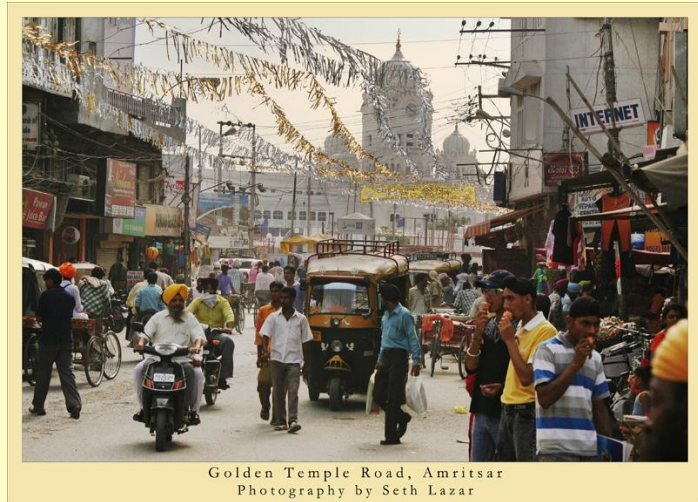
Further, the use of land is undergoing rapid transformation with residential areas being converted into commercial complexes and hotels for catering to tourism, trade and commerce. All these changes are taking place outside the framework of existing pattern of development with the result historicity of the area is being marginalized and diluted. In addition, large volume of built up spaces and change of use of land has resulted in creating numerous developmental and traffic/transportation problems besides destroying the valuable heritage. This has adversely impacted the very basis of existence and development of Amritsar. Accordingly, it is critical that the area around Golden Temple, Jallianwala Bagh, Town Hall, Gurudwara Shaheedan, Gurudwara Ram Sar Sahib and Gurudwara Santokh Sar Sahib should be carefully and thoughtfully preserved and conserved so that valuable heritage, past glory and historic wealth of the walled city is not lost in the haze of unplanned and irrational development of the walled city.

In order to achieve the objective, it would be desirable to declare area around Golden Temple, Jallianwala Bagh as the Heritage Zone which would comprises of areas enclosed by Guru Bazaar, Chaurasti Attari, Chowk Passian, Katra Jaimal Singh, Katra Baghian, Bazar Cheel Mandi, Bazar Mahan Singh, Katra Mahan Singh, Bazaar Ghee Mandi, Abadi Bagh Ramanand, Katra Himmat Singh, Chhauni Nihanga, Circular Road, Chatiwind Gate, Bazar Chatiwind, Katra Ramgarhian, Dhab Basti Ram, Namak Mandi, Katra Amar Singh, Katra Mohar Singh and Bazar Tunda Talab. The area includes the most valuable heritage of the city including Golden Temple, Jallianwala bagh, Gurudwara Shaheedan, Gurudwara Santokh Sar Sahib, Gurudwara Ramsar Sahib besides Town Hall and other buildings. The area to be brought under the Heritage Zone works out to be approximately 244 acres.

In addition to the Heritage Zone, it is also critical to safeguard, protect and develop the most critical approach to these historic monuments. Accordingly, Hall Bazaar from Hall Gate to the Town Hall and to Darbar Sahib should also be included in the Heritage Zone so that approach road to these monuments is also developed/regulated as integral part of the heritage conservation.

DEVELOPMENT CONTROLS/HERITAGE REGULATIONS

The role of development controls, zoning regulations, building bye-laws is crucial in preservation and conservation of built heritage. Areas identified as built heritage would require special provisions for their development because of their specialized character. It may revolve round specifying provisions relating to regulation of traffic, eliminating misuse of buildings for industrial or storage purposes, specifying uses which would be permitted in the buildings or areas which would not damage their basic character.



Golden Temple Road, Amritsar
Photography by Seth Lazar

FIG. 32 GOLDEN TEMPLE ROAD AMRITSAR

The Development Controls, etc. should be prepared with sensitivity after careful and detailed study and analysis of the area. Controls must be commensurate to the specific requirements of the walled city. However, in case of hardships to the owners/tenants of the buildings, appropriate incentives must be made available to them, so as to ensure the conservation of the buildings. Concept like Transfer of Development Rights (TDR) can be made applicable in case of such buildings which would require preservation etc. Large number of states in the country have already prepared Heritage Regulations which specifically deal with the planning, development and management of Walled City. These Regulations would add a new dimension to the development of such areas without compromising with the quality of buildings & spaces. Accordingly framing of **Heritage Regulations**, distinct from prevailing building by-laws, on the pattern of Hyderabad and Mumbai for the heritage buildings, areas and precincts would be critical in order to ensure that the basic fabric of these buildings and areas is not changed and essential architectural elements are not tempered with. The existing by-laws applicable to Amritsar are not in a position to respond to the challenges of Walled City and have caused more damage than good. They need to be amended on priority.

In order to protect and enhance the existing character it is proposed to prepare detailed guidelines for the heritage zone including conservation and tourism area, which would inter-alia revolve around:

- i) Prohibiting the change of land use and subdivision of land within the heritage zone.
- ii) Framing exclusive development control regulation for the heritage zone.
- iii) Using different controls in terms of:
 - a) Floor Area Ratio
 - b) Height controls
 - c) Land Use control
 - d) Setbacks/projections
 - e) Façade control
 - f) Material control
- iv) Using urban design as the mechanism to control and regulate development.
- v) Constitution of High Powered Committee comprising of experts in Art, Architecture, Town Planning, Heritage, History and Engineering to evolve strategies for

development of Heritage Zone including sanctioning of the building plan falling in the said zone.

- vi) Using Vernacular Architecture and the existing architectural features as integral part of the building design.
- vii) Rationalizing advertisement in the heritage zone through advertisement controls.
- viii) Pedestrianisation of approach road to Golden Temple and Jallianwala Bagh from Hall Gate to Town Hall to Jallianwala Bagh/ Golden Temple.
- ix) Widening the scope of Galiara project for creating more open spaces/ public vistas around Golden Temple/ Jallianwala Bagh based on the detailed study and analysis.
- x) Shifting of the Municipal Corporation office from the Town Hall and remodeling the building to convert it into a City Museum of Amritsar Heritage.
- xi) Undertaking large-scale plantation of the available open spaces/ parks existing within walled city.
- xii) Putting in place appropriately designed signages at critical areas for identification of areas of historical, architectural and tourist importance.

In addition, all the services laid down in the heritage zone should be made underground including, electrical, telephone etc. in order to minimize visual pollution. Display of advertisement on the buildings and along the roads should be regulated and made integral part of building designs/available spaces. Special lighting arrangements should be made to enhance the visual effect of historic buildings and available spaces. Congestion shall be eliminated by regulating the movement of vehicles, removal/re-location of informal activity, vehicular parking and widening of the forecourts of historic buildings. All unauthorized constructions should be removed; height of the buildings constructed in heritage zone shall be regulated in order to ensure that no construction permitted with height more than the existing height so that the ambience of Walled City is not diluted. The use of material on the façade should be brick and wood with concrete and glass not permitted to be used. Based on the above parameters, detailed strategies for the development of the Heritage Zone should be prepared and put in place on priority.

PEDESTRIANIZATION OF WALLED CITY

Looking at the heritage and historical importance of the walled city - Amritsar, it is proposed to designate/make Amritsar, a heritage city. The city at present suffers from large influx of vehicular movement on the narrow roads leading to congestion. Considering the large number of residents living in the area, major trade and commerce centers existing within the walled city, it will be desirable to pedestrianise the walled city by improving streetscape involving provision of walk ways, street furniture, planting trees and creating plazas. The total area of the walled city-Amritsar is of the order of 350 hectares with 2.4 kms in length and 1.5 kms in width. Considering the compactness and character, the entire walled city area can be covered on foot within a time span of 20 minutes from one end to another end. In order to pedestrianise the walled city, it is proposed to have adequate parking spaces located on the outskirts/gates of the city so as to restrict the entry of vehicles inside the core city. It is also proposed that the people going to the core city area should park their vehicles in the defined parking lots outside the city in the close vicinity of gates and use the battery/CNG operated buses/cycle rickshaws/cycles including the public rapid transport (PRT) system for movement

inside walled city. Accordingly, it is proposed to build multistoried parking on all the gates on the outer circular roads. In addition, all the metalled roads need to be replaced by putting road pavers to promote pedestrianisation.

INCENTIVES

Existing laws do not provide any incentive to owners of buildings of architectural and historical importance to preserve and conserve them. It treats all landowners on the same footing. This acts as a disincentive to such owners in the context of ever rising land values and availability of better opportunities of commercial exploitation. Misuse of most of such buildings is due to such disincentives. It would be accordingly desirable that owners of such buildings are given enough tax concessions by both local and state authorities in the shape of rebates etc for ensuring the proper maintenance and upkeep of built heritage. It would be worthwhile to look at the example of U.K. where substantial tax concessions

have helped in preserving the buildings having exceptional architectural and historical value. People are fast approaching the local authorities for granting the status of listed buildings so as to avail substantial tax concessions. This not only helps in identifying enormous wealth of built heritage but also its preservation and conservation. It will be worthwhile considering the institution of *heritage awards* which should be given annually to owners of privately owned Heritage buildings who set examples of preservation and conservation. In this era of opening up of Indian economy and economic liberalization, it would be



FIG. 33 HERITAGE BUILDING
SOURCE: (THRILLOPHILIA. 2020)

desirable to involve the *corporate sector* in the process of preservation and conservation. Tax incentives would help in flow of substantial funds in this field and would go a long way in achieving the objective. Punjab Government has already put in place a policy for promoting private participation in the maintenance, conservation and preservation of protected monuments for generating resources for restoring the original glory of these monuments as per archeological principles. The policy needs to be implemented with all commitment and sincerity. The policy needs to be extended to cover all heritage buildings in order to widen its scope to cover the entire Walled City.

CONCLUSION

Indian historic cities and settlements are complex and highly developed cultural resource entities and Amritsar is no exception. They show a wide diversity in their morphological character, being products of different geographical contexts, specific historic times, characteristics and functions. They embody numerous dynamic “Systems” and “Sub-systems” with definite structures and hierarchies, performing their specific roles but operating together in an urban spatial entity. They have to be treated with sensitivity on the issue of development. The historic cities have to be viewed both as source and repository of architectural and technical knowledge.

In the given context, it becomes critical that history, geography, morphology and cultural components of Amritsar heritage are carefully studied and analyzed before solutions for its preservation and conservation are put in place. Numbers of development schemes are already in the process of implementation or in the pipeline, all these need to be viewed critically in the context of their impact on valuable heritage, city structure and city fabric. Considering the present political, economic and developmental scenario, Walled City Amritsar is going to witness a new resurgent era of enormous growth and development with lot of investment and people coming into the city. Real estate values are going to rise sharply resulting in rapid conversion of land uses and enormous development pressure on the city and its existing inadequate infrastructure. The pressure would be more pronounced within the walled city which houses most of the valuable heritage. How these developmental pressures are rationalized and canalized for promoting the orderly growth and development of the walled city and its heritage, would hold the key to the future of the city and its position in the state and nation as the home of all virtues, heartbeat of majha and repository of spiritual and national heritage.

States must establish gender-sensitive, gender-responsive and gender-transformative policies and practices in the field of heritage". In addition, achieving gender equality and empowering all women and girls is essential for achieving sustainable development,

APPROACHING SUSTAINABLE DEVELOPMENT THROUGH LEVERAGING TRADITIONAL WATER STRUCTURES- CASE STUDY JHUNJHUNU

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APPROACHING SUSTAINABLE DEVELOPMENT THROUGH LEVERAGING TRADITIONAL WATER STRUCTURES- CASE STUDY JHUNJHUNU

ABSTRACT; Water holds the key to human living and ensuring quality of life on this planet. More than one billion people globally are facing water crisis due to various reasons. Situation remains alarming in the rain deficient areas. Inadequacy in meeting water demand and water resource management have emerged the greatest ecological, economic, and social challenges of 21st century (Karleuša et al., 2009; Parmar, 2003). Considering the limited availability of potable water on this planet, against ever increasing demand due to rapid population increase and industrialization, evolving appropriate strategies to manage water resource becomes critical (Fairburn, Imhof and Mohanty, 2017). In search for appropriate solutions, paper looks at the traditional water management techniques adopted in the past in the water deficient areas and suggest strategies how the traditional knowledge and techniques of water management can be leveraged to ensure availability of adequate quantity of quality water for meeting the basic needs of the human beings/ communities/ settlements. Paper tries to substantiate the findings based on the study and evaluation of the water management strategies adopted in the water deficient city of Jhunjhunu (Rajasthan) as the case study and explains its context in the water management at the settlement level in the current scenario.

Keywords: Water management, Traditional water structures, Jhunjhunu, Sustainable development

INTRODUCTION

Historically and functionally there exists an intrinsic and inviolable relationship between human beings, built and natural environment, which has sustained the communities and human settlements for centuries. But this age old relationship is fast losing its relevance in the present context due to lack of understanding and appreciation of the need and importance of maintaining balance between them, which has led to exploitation of valuable natural resources. Water has emerged as one such resource. Despite being called elixir of life and basic sustainer of human living, development and growth, it has been misused, abused and exploited unmindfully. In the emerging scenario potable water is becoming scarce and meeting basic water needs of all inhabitants has emerged as the crucial issue and major challenge facing the local authorities and developing nations especially India (Bandil and Mishra, 2018). Urbanization and globalization are the two major factors responsible for promoting our dependency on tap water supply, ignoring our rich traditional water management knowledge and techniques were developed by our ancestor's to ensure supply of water for meeting the basic human needs without compromising with the quality of life. This paper makes an attempt to promote understanding of the traditional principles of sustainable development followed in the area of water resource management at the community level and involving communities and making them active partners in the water resource management to achieve the goal of water for all on universal basis.

Paper is also proposing to revamp the water management program based on the principle of three R- Repair, Renovation and Restoration of water bodies in collaboration with public participation and to achieve the universal goal enshrined in the General Assembly resolution of providing clean drinking water as the basic human right.

About Jhunjhunu District;

Climatic and Geographical context:- Jhunjhunu, one of the 33 districts of state of Rajasthan, extending over an area of 5928 sq.Kms, with 28.12 latitude and 75.39 longitude, is recognized to be one of the most prosperous district of the state. (Census 2011). District lies in the sub-tropical area classified as semi-arid region. Aravali range of hills flank the south- eastern part of the district. Large copper fields located in the Sighana and Khetri (jhunjhunu.rajasthan.gov.in), dryness, extremities in temperatures and sparse rainfall define the region's attribute with average annual rainfall placed at 405.1mm and temperature rising to 47.4 degree C. Due to perpetual problem of availability of adequate water, district is known for its rich water conservation/ harvesting history ,structures and architecture. These water structures portray the sustainable approach invented, evolved and adopted by the inhabitants of the region to meet their basic water needs by sourcing and conserving water during monsoon and then using the water so conserved, during the remaining part of the year, when there are no rains. In addition to meeting the water demands, the typologies of water structures developed in this region also catered to the physical, cultural, social and in some certain cases the religious needs of the communities. With perpetual neglect, misuse and abuse over considerable period of time, majority of these water structures have suffered irreparable damage and accordingly have become non-operational. Few operational water structures now available are unable to meet the basic water demand of the local communities. Also known for numerous water structures, city of Jhunjhunu now faces considerable shortage of water supply due to constant neglect of these vernacular water management structures. This neglect on the part of local community has led to these valuable structures/resources losing their integrity and functionality, turning them into ruins/dump yards. Considering the fact that these historic water structures have aesthetic-spiritual/

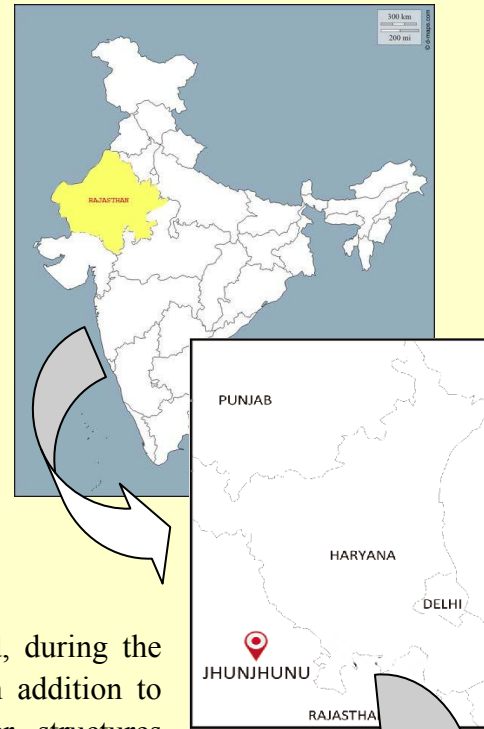


Fig 34: Location of Jhunjhunu with adjoining state boundaries

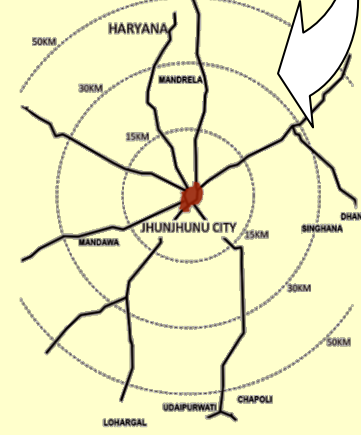


Fig 35: Action area selected for identifying water structures in Jhunjhunu

religious-social-historic- values, revitalizing them will not only help the city/region in meeting the basic requirements of water in addition to existing system of supply of water but would also make value addition to cultural heritage as well as economy of the city.

Historical context: Jhunjhunu ranks high among all districts of Rajasthan in the parlance of history, planning and architecture. The pre-dominance of its water structures in the physical, social, religious and cultural context has their genesis in the Lohargal, holy shrines of pilgrimage, where Pandwas are believed to have taken bath and washed their weapons in the Surya Kund to attain salvation. The district has been invaded and ruled by various kings and Nawabs and is home to various architectural styles and structures. District is also known for the bravery and sacrifices made by the local communities to save the country, beautifully narrated through various monuments and fresco paintings created over a period of time.

Demography: With number of inhabitants placed at 21,37,045, Jhunjhunu district has population roughly equal to the nation of Namibia or the US state of New Mexico, giving it a ranking of 214th in India (out of a total of 640). District is predominantly rural in nature with merely 22.89% population living in urban area. The district has a low population density of 361 inhabitants per square kilometer and literacy rate of 74.22% (Census 2011). Its population growth rate over the decade 2001-2011 was 11.81%.

WATER STRUCTURES IN JHUNJHUNU

Jhunjhunu city, with history spanning over 1000 years, having population of 1,18,473 is known for its temples, shekhawati havelis, excellent frescos, educational institutions, step wells etc. City had the distinction of having large number of water related structures, which were created over a period of time. These structures were designed, located and constructed in various parts of the city to supply fresh water to growing population based on various factors like specific water requirement, population to be catered, suitable gradient, cost effectiveness etc using vernacular building materials and locally available construction techniques (Vyas, 2011). The planning and designing of communities as neighborhood was also based on/ revolved around creating adequate number of water harvesting/



Fig 36: Traditional water structures in historic core boundary of Jhunjhunu

storage structures are having adequate water capacity. In addition, their location was community centric, based on easy accessibility and self-sufficiency in water.

Looking at the existing framework of the Jhunjhunu town, it has been observed that city has predominance of two types of structures which have been created during its long history of growth and development for water harvesting/storage. These typologies of water harvesting/storage structures in the local dialect, called as Bawdi and Johads as defined below in terms of their numbers, location, purpose, water storage capacity, status of structure, present use etc.

- 1. Bawdi---** Bawdis are, primarily and essentially, water harvesting and storage structures, which are meant for catering only to the drinking water requirement of the community. Quality of water, stored accordingly remains very high. Water remains protected and access to structure is limited only to human beings. Structures are made to serve twin purposes of providing space for people to socialize and interact besides space for water storage and water supply. Accordingly, these structures are designed as magnificent structures and are compartmentalized into two broad divisions, comprising of: vertical shaft to draw water and steps ingress to well along with the halls, pavilions and underground chambers around for socializing. In addition to meeting the demand of drinking water, these structures showcased religious value, associative values, and community gathering space, mark of royalty or nobility. Accordingly, these structures required lot of resources for creation and were limited in number. The location and the cross-section of structure is detailed below. At present there exist six Bawdis in the city with a total water storage capacity of 116.3 million liters. Udaipurwati ki Bawdi has the highest storage capacity of 68 million liters of water. Three Bawdis have been found to have excellent structures with two falling in good category and only one in poor. All Bawdis are presently in a state of neglect, misuse and abuse with no water stored in it. They all have the potential of being renovated and put back into use, adding to water capacity of the city to the tune of 116.3mld. These structures, known for their quality of art and architecture can be effectively leveraged not only for showcasing its glorious past but also improving the economy of the city.
- 2. Johads---** Johads were the other typology of structures which were created to meet the water requirement of the community. Unlike, Bawdis, these were structures which stored water in open. Accordingly quality of water stored/ harvested was not of very high order. Water stored was meant to be used for meeting the requirement of community for their daily needs of washing and bathing besides the water requirement for animals. These structures had water storage capacity depending upon area/volume of depression and catered to the day to day demand of water of the community. Their location was guided by the natural depression and slope of the site so as to harvest water by gravity. Since this typology involved minimal construction, accordingly they were not cost intensive. Numerically, there exist large number of Johads in Jhunjhunu with a large water storage capacity.. Majority of them are abandoned and in a state of total neglect and dilapidation. There exists enormous opportunities to revive these water bodies not only to meet the water needs of the water deficient city but can also help in improving the ground water table and ground recharging. It can also help in improving the micro-climate of the city by the presence of water and facilitate growth of vegetation and greening the city. Their storage capacity can be increased by appropriate site planning and redesigning. These

Johads can make enormous value addition to the city, ecology, environment and its tourism potential, economy and quality of life.

Table 1: Description of typology of water structures in Jhunjhunu

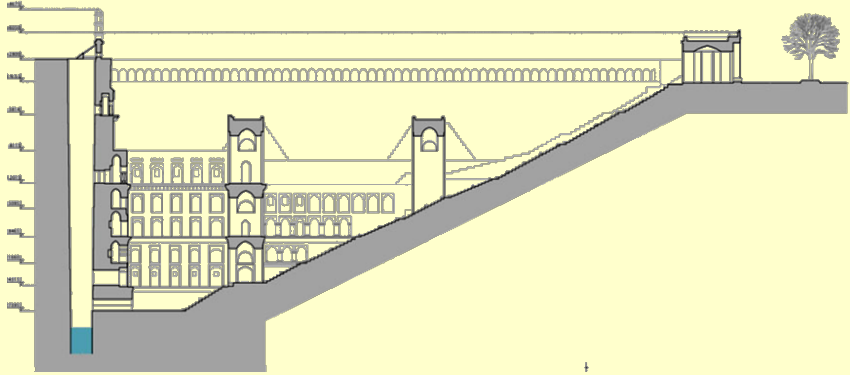
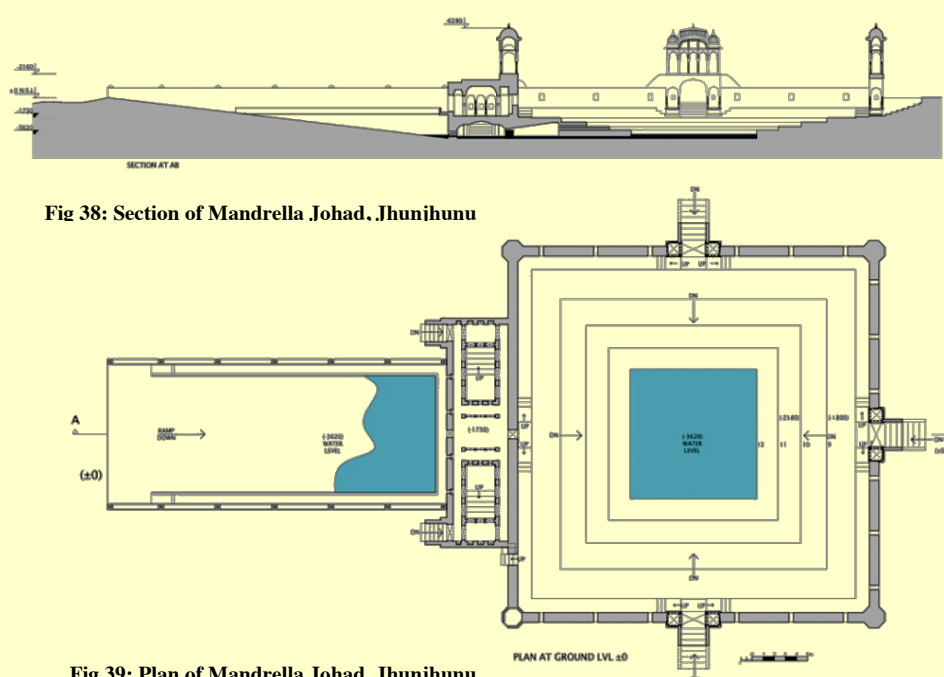
Typology	Description	Purpose
Bawdi	Magnificent structures customarily with two divisions: vertical shaft to draw water and steps ingress to well alongwith the halls, pavilions and underground chambers around (Michell & Davies, 1990).	In addition to meeting the demand of drinking water these structures had sometimes religious value, associative values, community gathering space, mark of royalty or nobility.
 <p>A cross-sectional diagram of a Bawdi well. It shows a vertical shaft on the left leading to a water source. The shaft is surrounded by a series of steps that lead up to a large, ornate structure with multiple domes and arches. The structure is built on a sloping ground. To the right, there is a smaller structure with a dome and a tree.</p> <p style="text-align: center;">Fig 37: Section of Mertanii ki Bawdi, Jhunjhunu</p>		
Johad	Built across counter's slope and natural depressions to capture rain water (Bhattacharya, 2015).	To meet basic water demands of washing and bathing of human as well as animals.
 <p>Two diagrams illustrating the Mandrella Johad. The top diagram is a cross-section showing a long, low structure built across a slope. It has a central dome and two smaller domes at the ends. The structure is built on a sloping ground. The bottom diagram is a plan view at ground level, showing a rectangular structure with a central square water tank. The tank is surrounded by a series of concentric rectangular walls. The plan shows various rooms, corridors, and a staircase. The ground level is marked as ±0.</p> <p style="text-align: center;">Fig 38: Section of Mandrella Johad, Jhunjhunu</p> <p style="text-align: center;">Fig 39: Plan of Mandrella Johad, Jhunjhunu</p>		

Table 2: Description of water structures of Jhunjhunu

S.no	Typology/ Name	Co-ordinates	Capacity	Structural stability	Water level	Present condition of structure
1	Bawdi/ Mertaniji ki Bawdi	28°8'1.04"N 75°23'42.15"E	15 million gallon water per season	Excellent	Dry	Abandoned



Fig 40: Mertaniji ki Bawdi, Jhunjhunu

2	Bawdi/ Chetan Das Ji ki Bawdi	27°41'30.0"N 75°23'35.0"E	10 million gallon water per season	Excellent	Dry	Abandoned
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Fig 41: Chetan Das ji ki Bawdi, Jhunjhunu

3	Bawdi/ Ganga Mandir Kund	28°05'49.7"N 75°50'20.61"E	2.6 million litres water per season	Good	Low	Maintenance under supervision of private trust.
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Fig 42: Ganga Mandir Kund, Jhunjhunu

4	Bawdi/ Chapoli ki Bawdi	27°44'20.23" N 75°33'0.77"E	3.7 million litres water per season	Good	Dry	Abandoned.
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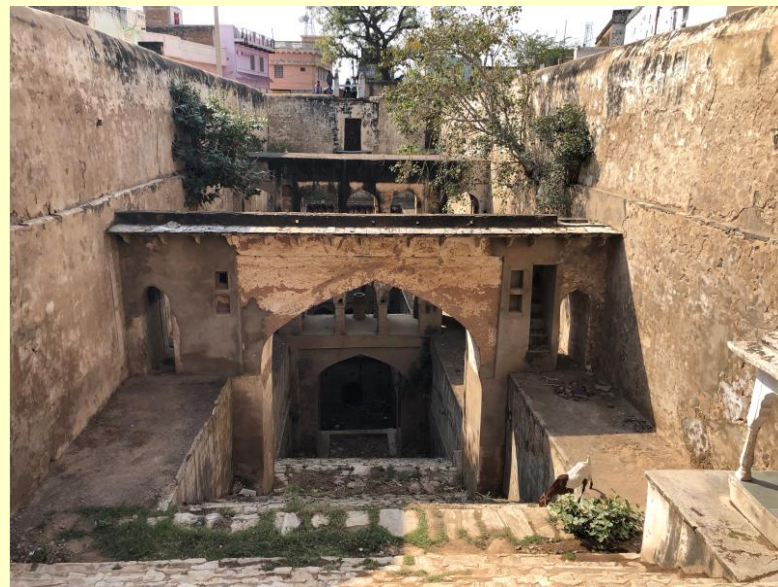


Fig 43: Chapoli ki Bawdi, Jhunjhunu

5	Bawdi/ Udaipurwati ki Bawdi	27°43'52.09" N 75°28'28.21"E	68 million litres water per season	Excellent	Dry	Maintenance under supervision of private trust.
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Fig 44: Udaipurwati ki Bawdi, Jhunjhunu

Jit Kumar Gupta
Yamini Gupta

6	Bawdi/ Dhana ki Bawdi	28°5'27.40"N 75°51'11.71"E	17 million litres of water per season	Poor	Dry	Abandoned. Vegetation growth.
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Fig 45: Dhana ki Bawdi, Jhunjhunu

Jit Kumar Gupta
Yamini Gupta

7	Johad/ Mandrella Johad	28°19'10.11" N 75°25'35.12"E	5.49 million gallon water per season	Good	Dry	Abandoned
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Fig 46: Mandrella Johad, Jhunjhunu

8	Johad/ Mandawa Johad	28°02'31.1"N 75°09'09.9"E	3.6 million gallon water per season	Excellent	Low	Abandoned.
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Fig 47: Mandawa Johad, Jhunjhunu

9	Johad/ Samas Talab	28°7'43.50"N 75°23'24.63"E	2.7 million gallon water per season	Excellent	Moderate	Abandoned.
						
<p style="text-align: center;">Fig 48: Samas Talab, Jhunjhunu</p> <p>Note: Structural stability has been categorized into 3 broad categories. Excellent- When the structure is intact and there is no risk accessing it. Good- When the structure is not in dilapidated condition but requires maintenance and repair. Poor- When the structure is in ruins.</p>						

OBJECTIVE

Water remains a critical element of human growth, development and survival. Accordingly making available sufficient amount of water to all inhabitants remains most important responsibility of urban local bodies managing these settlements. Globally, all cities are suffering from perpetual shortage of water which is adversely impacting the human living and quality of life. Worst sufferers are the marginalized sections of the society, who have limited resources to meet the basic requirement of shelter, food etc. Challenge becomes all the more absolute in case of areas which suffer from the limited availability of water due to absence of the perennial source of water supply or deficiency in rain fall. These areas, for their sustainability have to search for alternate solutions. Historically, human settlements have depended on conserving and preserving natural sources of water which unfortunately have been neglected in the present approach to water management in urban areas. Leveraging traditional systems can help in rational water management and promoting sustainability based on water conservation. Looking at the entire context of city planning and development, paper explores the options of reviving the traditional water harvesting structures for making Jhunjhunu a self - sustaining city and to develop

ownership and civic sense among local community with the help of a multidisciplinary approach which would include:-

1. Assessing local communication patterns and information sources (Luginbühl and Hadorn, 2008)
2. Targeting the diversity of end users to ensure availability of water for all through formation of conservation groups and targeting diverse population involving:-
 - Youth who will one day will become experts in water management (Karleuša et al., 2009)
 - Women, being universal domestic water managers and end users of household water, to control water resources and to make rational decisions.
 - NGOs and CBOs besides Residential welfare Associations
 - Educational institutions and Religious institutions

REVIVAL STRATEGIES

Managing water requires innovative strategies. Community has to be educated to value water so as to minimize its consumption. The basic principle on which the water management policies should be evolved should gravitate around; ***slow the flow and breaking the water besides promoting operational efficiency of the plumbing equipment***. In addition, we have to revive all the available sources of water, both traditional and non-traditional, to augment water supply. Existing system of sanitation, which is water based and water intensive, has to be changed to non-water based options with technology leveraged to minimize the quantum of waste. Rain water harvesting and river water; offer the best option to promote sustainability of human settlements in terms of water. Reducing, Refusing, Recycling and Reuse, however remain the basic options for water sustainability. Involving communities and adopting traditional water management techniques will be critical for alleviating the ill effect of drought and urbanization, with active public/ community participation (Rustogi and Singh., 2017).

Some of the measures that can be adopted for water management in human settlements should involve;

1. Desilting of catchment area of bawdis to improve storage capacity and water table (Keshab Das)
2. Removing algae from water structures to improve quality of water and make it fit for human consumption using flushing as the mechanism.
3. Reducing nutrient concentration in the water body through dilution.
4. Making water safe for drinking by covering bawdis and wells to protect them against unauthorized intrusions.
5. Increasing depth of the Johad so as to increase their water holding capacity

6. Organizing cleanliness drives like “Swachh Bharat Abhiyan”.on regular basis.to maintain the quality of water
7. Conducting onsite training programs to make communities aware and self-sufficient about the restoration practices for water bodies.
8. Creating dedicated public health facilities for washing and bathing, for both men and women.
9. Making water bodies restoration community centric by spreading awareness among local community about role and importance of revival of these structures on sustainable basis.

Some of the measures that can be adopted for achieving the objective are listed below:-

- a. Promoting Water-tourism: - Several stepwells in Jhunjhunu have sacred values due to their location in the precincts of temples/ associative with saints. They can be leverage to promote cultural experience for the tourists and raising resources for maintenance/development of water bodies besides generating employment opportunities for residents..
- b. Promoting painting; Painting of walls , surfaces corridors, steps of step-wells with regional and traditional folk motifs will make people aware about their rich heritage for generating employment opportunities for local artists and involving more and more people in the conservation and restoration of the traditional water structures..
- c. Creating awareness through conducting lectures and educating people about how reviving these traditional water management techniques can help in sustainable growth of the city and benefit the locals (Karleuša et al., 2009)
- d. Using animated cartoons and TV spots can be effectively used to impact children regarding promoting their interest in traditional water management techniques to create sense of responsibility since childhood. .
- e. Public lectures can be organized on World heritage day, World water day and World Earth day.
- f. Organizing public meetings at the community level on regular basis for discussing and educating them about sustainable solutions to their water related problems.
- g. Attracting youth by street plays or Nukkad natak on theme of traditional water management techniques (Prasad, 2016).
- h. Involving educational institutions by organizing campaigns and school/ college trips to visit sites of traditional water structures.
- i. Holding various competitions like debates, declamation, poster making, photography, painting on the relevant topics associated with sustainable water management techniques.
- j. Exhibiting the heritage associated with these structures on special national/ international days (Syms, 1997).
- k. Floating competition in schools and colleges regarding designing of motifs or painting the water structure keeping in mind the heritage associated with them..
- l. Display of posters and printing stickers promoting the heritage for spreading awareness.

- m. Release of newsletter describing the history and present situation of these structures and importance of reviving and maintaining them.
- n. Production and display of short movies and songs in groups in community and spreading through radio and internet.

CHALLENGES

Despite distinct advantages of traditional water sourcing structures, their potential has not been fully exploited with the result majority of human settlements are suffering from perpetual/ acute water shortage. Reviving those structures for sourcing/augmenting water for human habitats will be the greatest challenge in the present scenario. Few of these challenges have been enumerated as under;

1. Reluctance on the part of users to access water at source due to home based tap water supply.
2. Vested interests of the agencies involved in the supply of water at the local level.
3. Rapid Industrial growth
4. Lack of awareness in the local community about the value of the heritage and need of the sustainable approach besides complete ignorance about the gravity of situation and dilapidated condition of step-wells.
5. Lack of awareness and commitment on the part of public and private trust taking care of these structures.
6. Human vandalism
7. Lack of government initiative and commitment in managing and restoring traditional infrastructure (Punja)
8. Over population and ever rising demand for land for residential, commercial and transportation, haphazard development around the water structures/ natural drainage channels leading to the rise of the impermeable surface ,resulting into obstruction of flow of water and lowering of ground water table.
9. Using these structures for dumping the city waste leading to diseases, impacting the visual landscape and deteriorating the heritage value of these structures.
10. Lack of sense of belonging and absence of associative value among migrant makes people least concerned about the heritage value of these structures.
11. Lack of co-ordination among various agencies and availability of dedicated resources for reviving and revitalizing these historical structures.

ADVANTAGES

Restoring the traditional water structures existing in human settlements are known to have distinct advantages in terms of providing numerous benefits to the people and communities living therein, which helps them not only overcoming the basic problem of sourcing adequate water but also making value addition to the settlement in terms of physical, social, economic and

cultural aspects. Reviving the old glory and creating ownership of the communities will make these settlements a better place to live and work. Various benefits that will accrue due to revival, restoration and reuse of the old water heritage structures can be enumerated as under;

- a) Social benefit: Restoring traditional heritage water structures will enhance the social capital. It will not only act like a catalyst for growth and well-being of communities but will provide people with sustained access to water resource.
- b) Economic benefit: Heritage attracts tourists and hence promotes tourism. Tourist trails or tourist spots thus created will generate and promote economy.
- c) Regional identity: Heritage is known for its capacity to enhance and provide city a distinct identity.
- d) Health benefits: Creating awareness about role and importance of these heritage structures as promoter of sustainability will lead to successful restoration of these water structures which would no longer be used as garbage dumping sites by the residents, avoiding risk of diseases.
- e) Solution to water crisis; If these valuable water structures undergo periodic or regular cleaning they can go a long way in meeting water demand of ever increasing population, saving the city from emerging water crisis.
- f) City's over-all growth and development: - These traditional systems depict culture and heritage which play an important role in physical, social, economic growth, development and recognition of a city. Restoring these heritage water structures will also help in achieving the goals enshrined in the United Nations Conference on Sustainable Habitat held in Rio de Janeiro (Sharma and Ram, 2013).

CONCLUSION

Considering the fact that fresh water is a finite source and critical for promoting and sustaining life on long term basis, society needs to adopt a holistic approach for water management. Developing a sustainable approach by reviving old age techniques of water management can lead cities from a state of scarcity to that of abundance. To maintain a rational balance between the built and the natural environment it is necessary to promote and make optimum use of the existing infrastructure rather than creating new infrastructures. The existing water structures are the concrete evidence revealing our ancestor's understanding wisdom and technology in water management. These techniques were developed in response to the necessity of that time which holds relevance even in the present context. Unfortunately, despite distinct advantages, these heritage water structures do not find any recognition and mention in the modern day literature even in the Master plans, Zonal development Plans etc which are prepared to provide basic amenities and services to all the urban residents. (Prasad, 2016). Before it is too late, we need to learn from the sustainable approach adopted and practiced in the past to cater to the water demands of communities and people at local level. Accordingly, considering the overall development and larger interest of the city, be it economic, cultural or regional, it is crucial to revive and spread awareness about the value of water related vernacular structures and sustainable water management practices which were adopted and made operational by our cities

in the past. Government of India and state governments must come out with a detailed policy about recognizing the role and importance of these valuable/heritage/vernacular structures and define agenda for their preservation, conservation, restoration and reuse as integral part of, sustainable city planning, development and management so as to make human settlements self-sustaining in terms of availability of water in sufficient quantity and of appropriate quality besides helping in preserving and restoring our valuable built heritage.

“States Parties should “ensure an appropriate and equitable balance between conservation, sustainability and development, so that World Heritage properties can be protected through appropriate activities contributing to the social and economic development and the quality of life of our communities”- Policy for the integration of a sustainable development perspective into the processes of the World Heritage Convention

AMRITSAR- A CITY OF MYTHS AND REALITIES

Ar. J.K.GUPTA



Jit Kumar Gupta
Yamini Gupta

AMRITSAR- A CITY OF MYTHS AND REALITIES

INTRODUCTION

Cities are reservoirs of skill and manpower and accordingly have been reckoned as engines of economic growth and development besides generators of wealth and major contributors to the economic health, social well being and quality of life prevailing in any area. In addition, cities are also repositories of Cultural Heritage reflecting personality of a community over different periods of its existence. Heritage provides vital link between past and present and has important role cast in shaping the destiny of the community. These footprints of past provide us with vital information and knowledge about the ancient culture, way of life, level of development, building techniques, use of materials, Art and Architecture besides physical, social and economic edges of a society of a particular period. Accordingly, it becomes important that these repositories of knowledge, forming irreversible links between past and present, are not only, carefully and thoughtfully, preserved but also appropriately maintained and developed in order to ensure that they are not lost to the posterity.

India with one of the longest history of human habitation and civilization spanning over a period of 5000 years has been fortunate to inherit enormous wealth of built heritage. If India has inherited enormous wealth of built heritage, State of Punjab in general and Amritsar city in particular has also followed the footprints of the great nation and state. With history spanning over 428 years, Amritsar has emerged as the premier city of the state of Punjab and is known as not only its economic but also religious and political capital. City of Golden Temple, also symbolizes the spiritual heritage of the people of Punjab. Presence of Golden Temple and Jallianwala Bagh has given a unique place to this dynamic and vibrant city of Amritsar in the history of the state and the nation.

Growing from a small village, *Guru ka Chak/Chak Guru Ram Das*, Amritsar has emerged as the focal point of Sikh faith and is rightly called *Sifti da Ghar* (The Home of all virtues). During its journey of last 433 years, Amritsar has become the premier city of the state of Punjab and is known as not only its economic but also religious and political capital. City of Golden Temple, also symbolizes the spiritual heritage of the people of Punjab. Presence of Golden Temple and Jallianwala Bagh has given a unique place to this dynamic and vibrant city of Amritsar in the history of the state and the nation.



FIG. 49 HARMINDER SAHIB
SOURCE: (HINDU-TEMPLES.COM, 2019)

With city growth and development revolving around the Harimandir Sahib, Amritsar grew in an organic manner radiating in all directions. Rapid growth of Amritsar was witnessed during the period of Sikh *misl*s in the later half of 18th century when the city was almost rebuilt. Harimandir Sahib was reconstructed with the holy tank and *parikarma*. In addition, *bangas*, *katras*, *bazaars*,

forts, gardens, tanks and *havellies* came up in large number as constituents of the expanding city. Major contribution to the city built heritage came from Maharaja Ranjit Singh, greatest builder of his time, in the shape of several structures created during his regime. Encircling his summer capital with a masonry wall, having 240 watch towers and 12 beautiful gates, to safeguard the city from invaders was the most beautiful structure he created in Amritsar city, majority of which got lost after the annexation of Punjab by British. Gobindgarh Fort built at the behest of Jaswant Rao Holkar, as his additional treasury, was another monument constructed by Maharaja on a commanding site to defend the city. The fort constructed in brick and lime having number of bastions, majestic iron gates and several canons placed on the ramparts still exists but with most of its glory lost due to perpetual and constant neglect(which is under the process of restoration).

In addition to these structures, Maharaja also created Rambagh, a beautiful garden spread over an area of 84 acres on the pattern of Shalimar Garden of Lahore. Following the example of Maharaja, his courtiers also built 25 gardens spread all over the city including Bagh Akalian, Bagh Teja Singh, Bagh Rama Nand etc. most of which have been lost to the haphazard and unplanned growth besides illegal encroachments. In addition, numerous structures were created by religious and cultural institutions all over the city. With specialized markets coming up around Darbar Sahib, having its distinct character, city developed a personality of its own. Khalsa College complex created outside the city, gave heritage a new definition whereas Durgiana Temple complex enhanced the spiritual ambiance of the city. Looking at the cityscape one can clearly see it dotted with footprints in the shape of buildings, complexes and precincts defining its heritage vocabulary. Over a period of time and in the face of ever increasing developmental pressures generated due to enormous growth of population and physical expansion, built Heritage located within walled city has come under enormous threat. This threat is assuming alarming proportion due to constant neglect and misuse perpetuated over the built Heritage, both by parastatal agencies and people at large. This has led to posing serious threat to the very existence of the valuable heritage and accordingly calls for evolving appropriate strategies and framework for action for its conservation and preservation.

WALLED CITY: AMRITSAR

The walled city is the most important place in the history of Amritsar where the fourth Guru Ram Das Ji constructed the sacred Golden Temple. Spread over 350 Hectare , walled city housing one sixth of population of the metropolis, with a highly complex social and cultural fabric, deserves to be considered as a distinct layer to preserve its unique and distinct physical, social, economic and historical character. With history spanning over 438 years and marked by the presence of 52 historical buildings , walled city is considered heart and soul of Amritsar, containing narrow winding streets of Medieval pattern with state of art buildings designed under the influence of Rajputana and Islamic styles of Architecture. Walled city provides ample opportunities and challenge for giving heritage a new theme and vocabulary in the growth and development of Amritsar city. It had traditional spaces like streets, squares and common courtyards. The architectural styles, materials used for different purposes in different ways, like woodcarvings, *jali* work, etc. reflect the high level of craftsmanship.

The walled city was built on human scale i.e. a pedestrian entity. The narrow zigzag street pattern is a typical medieval planning concept and was not meant for vehicular movement. The maximum distance from one corner to another is 3 km and almost every area around Golden

Temple (the nucleus of city) is within 1-2 km reach. So it can be visited by foot from the remotest corner within a time span of 25-30 minutes.

Initially, the walled city of Amritsar was punctuated by number of parks and open spaces, which over the time have been converted into commercial purpose. The area such as Hall gate, which at present is acting as C.B.D., was initially a green open space. Likewise, Ramanand Bagh, Jhande Wala Bagh, Kesari Bagh, Bagh Akalian, etc. which were earlier green areas, have now been exploited for commercial use.

The figures above very well describe how parks and open spaces of the city have been eaten up by development activities, majority of which are commercial in nature. Such conversion has led to lack of breathing spaces within walled city. Walled city now suffers from acute shortage of green spaces and high degree of congestion, both in terms of human beings and buildings. Strategies need to be evolved to stop further conversion of land use to commercial and subdivision of land in order to restore old glory of walled city and open spaces wherever possible.

The walled city of Amritsar has a rich heritage in the form of historical buildings/areas, gardens, artifacts, townscape and streetscape. However, with the changing life styles and priorities of the living community, all are in state of neglect. The threats posed to these areas and buildings are misuse, alteration in the architectural fabric, with large number of additions and alterations made. So far, no effort has been made at the local level to preserve them.

HERITAGE STRUCTURES IN THE WALLED CITY

GOLDEN TEMPLE

The highest seat of the Sikh religion, the holy Golden Temple is the nucleus of the walled city. It was the place from where Amritsar as a settlement originated. The living monument of spiritual and historical traditions of the Sikhs, the Hari Mandir, popularly called the Golden temple, has been a source of inspiration for Sikh community ever since it was founded. It is considered as the fifth most revered place in the world and is visited by large number of tourists and pilgrims. HariMandir is a small structure, having most beautiful proportions, standing in the huge water tank called *Sarovar*. The building has beautiful carvings and engravings on the walls. Outside, the building is clad with the Golden *patras*. It has domes and *chattris* speaking of the typical Punjabi architecture. The building is approached through a passage constructed over the sarovar. The approach to the building is through four majestic gates. It is a huge complex which comprises of not only *Darbar Sahib* but also *Akal Takht Sahib*, *Langar Hall*, *Manji Sahib*, various *Sarais* and *Bungas*. At present various issues like parking, congestion on approach roads have arisen. Majority of which are being addressed now. There is an immediate need of proposing pedestrianization, land use freezing, demolition of shops, etc., which in future may disturb the view/ aesthetics of Golden Temple.



FIG. 50 GOLDEN TEMPLE
SOURCE: (PUDA. 2010)

JALLIANWALA BAGH

Jallianwala Bagh is located in close vicinity of Golden Temple. The place has great importance and reverence in the freedom struggle of India. It was the place where on the *Baisakhi* day large number of Indians who had gathered to listen to freedom speeches were fired upon indiscriminately without any warning, killing large number of innocent people. The place is marked by a very narrow entry which was used by General Dyer to block the exit and bring guns/armed people to fire on the innocent people. The place is revered as most sacred and has its name in the Indian Independence struggle. The Jallianwala Bagh forms importance place on the itinerary of the visitors to the city. Numbers of government projects have been taken up to beautify the environs and to preserve the heritage of the area.

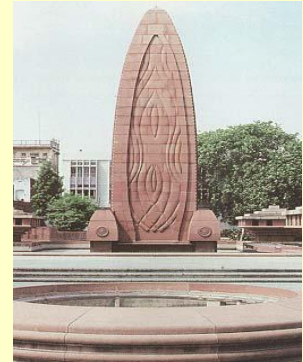


FIG. 50 JALLIANWALA BAGH
SOURCE: (PUDA, 2010)

MOSQUE OF KHAIR-UD-DIN

It was built in 1877 and is located in Hall bazaar. It is one of the beautiful pieces of Islamic architecture. It has served as Jama Masjid and reminds the socio-cultural aspect of the city. Mosque is well maintained, but it has been overshadowed by the surrounding high rise structures and commercial buildings, obscuring its glory.



FIG. 51 MOSQUE OF KHAIR-UD-DIN
SOURCE: (PUDA, 2010)

MOSQUE OF MOHAMMED JAN

Built in 1872, the mosque is now in a state of complete neglect. This is also a good piece of Islamic architecture and has many architectural features. The mosque is not yet declared as the protected monument. In order to protect and save the beautiful structure, it will be desirable that the building is declared as protected monument under the state Act and

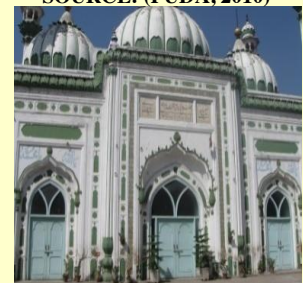


FIG. 52 MOSQUE OF MOHAMMED JAN
SOURCE: (PUDA, 2010)

construction around the building is properly regulated and rationalized.

GATES AND WALLS

Massive wall (25 yards broad and 7 yards high) was constructed in 1825 by Maharaja Ranjit Singh. Around this high wall, a moat had also been constructed to protect the city of Amritsar from enemies, which over the period of time has been encroached upon by different activities. In today's context, historic character of wall has vanished largely due to encroachments. Area under wall in the south is largely encroached by govt. offices like police stations whereas part of it has been kept as green area. In the north and all along the moat, area is encroached by different commercial activities. There were initially 14 gates in the city. Out of these, six gates have already been demolished which includes



FIG. 53 HALL GATE
SOURCE: (PUDA, 2010)

Beri Gate, Mahan Singh Gate, Sheranwala Gate, Bhagtanwala Gate, Hakima Gate and Gilwali Gate. The remaining gates need conservation.

TOWN HALL

This was built as an administrative nucleus in 1863 by the British. It is located on the southern end of Hall Bazaar. It is constructed in red bricks with lime and *surkhi* as the binding material. It has semi-circular arcades and a beautiful *chhatri* at the front entrance. It has a flat roof made of timber planks and brick tiles. The MC office located in this complex which is going to be shifted in a short period and this building shall be used as a city museum. The building has developed cracks and growth of plants has also taken place, resulting in creating dampness in the walls.

HERITAGE STRUCTURES OUTSIDE WALLED CITY

SAINT PAUL'S CHURCH

This church is located on Court Road adjacent to Head Post Office and opposite New Rialto Cinema. It has a seating capacity of 200 persons. The church is in a comparatively good condition but its surroundings are neglected and need improvement and orderly development.



FIG. 54 ST. PAUL'S CHURCH
SOURCE: (PUDA, 2010)

BAIT-AL-MASSIH CHURCH

In addition to St Paul Church, there exists another Church in the vicinity of walled city and is known by the name Bait- Al- Massih Church. The church was built in 1852 and is located outside Rambagh Gate. It has very nice proportions and is a fine piece of Victorian architecture. It is situated outside the Rambagh Gate. However, it suffers from high degree of traffic congestion.



FIG. 55 BAIT-AL-MASSIH CHURCH
SOURCE: (PUDA, 2010)

DURGIANA MANDIR

Built in 1924, Durgiana temple is an important religious center in Amritsar. It is in close vicinity of Amritsar Railway Station & about 1.5 Km from the Bus Stand. This has been built following the pattern of Golden Temple including locating structure within a huge water tank. The temple is visited by thousands of people, both locals and tourists. However, there is not enough parking spaces for the visitors and the approach to the temple is also not well defined as in the case of Darbar Sahib. The area around the temple, especially along Shivpuri, is encroached upon by the *jhuggi-jhoparis*, which is also affecting the aesthetics of the temple. A proper access



FIG. 56 DURGIANA MANDIR
SOURCE: (PUDA, 2010)

and parking area is required for the temple, having great religious significance. Improvement Trust, Amritsar has taken up the Durgiana Temple beautification scheme.

KHALSA COLLEGE

Khalsa College is a unique master piece of Sikh architecture. It was planned in 1892 by Sardar Ram Singh of Mayo School of Art. Its foundation stone was laid in 1904. The basis of planning



FIG. 57 KHALSA COLLEGE
SOURCE: (PUDA, 2010)

and designing of this college has been taken from Harvard University of USA (H – shaped plan of main building). The architectural style is a hybrid of Mughal and Rajputana architecture. There are Mughal style Jharokhas, Jali work, Chattris and Rajputana style arches and huge pillars. The campus has got well distributed and spacious open spaces. The construction was made by renowned contractor S. Dharam Singh, in whose memory Dharam Singh Market near Golden Temple has been constructed by the Improvement Trust.

WATCH TOWERS:

Two watch towers were constructed by S. Jassa Singh Ramgarhia i.e., Burj Baba Phula Singh and Baba Atal Rai Tower. These are octagon shaped minarets with height of about 100 feet. These are built in lime and *surkhi* with *Nanak Shahi* Bricks.

(i) Burj Baba Phula Singh

It was built in 1923 by Mahant Narain Singh. It is situated in front of Bus Terminus near the city center. It is circular in shape, four storied high with a *chattri* (dome) at the top. There are smaller *chattris* on all four sides. It is constructed of red bricks in lime and *surkhi*. The approach to the building is through the road leading to truck terminal, which is in a worse condition.

(ii) Baba Atal Rai Tower

It is the place where Guru Hargobind took his last breath and tower is named after Guru Hargobind's son. It is one of the tourist destination located in the vicinity of Golden Temple. It is octagonal in shape and one has the distinction of being one of the tallest buildings of Amritsar. It has great religious value.

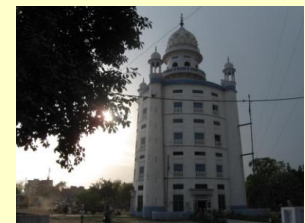


FIG. 58 BURJ BABA PHULA SINGH
SOURCE: (PUDA, 2010)

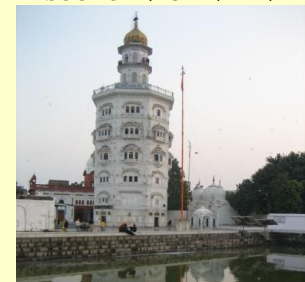


FIG. 59 BABA ATAL RAI TOWER
SOURCE: (PUDA, 2010)

GOBINDGARH FORT:

It was built in 1809 by Maharaja Ranjit Singh and is located on the western side of the Lohgarh Gate. The wall of the fort had numerous bastions with guns fixed. It was used as a treasury of Maharaja Ranjit Singh. It is constructed of red bricks mixed with lime and *surkhi*. Earlier it was under the Indian army but now has been handed over to State Tourism Department for converting into heritage hotel.



FIG. 60 GOBINDGARH FORT
SOURCE: (PUDA, 2010)

DISTRICT COURTS

District Courts are located in the building which was built in 1876. The building is enclosed in the triangle formed by Mall Road, Court Road and Ajnala Road. It is built in red bricks with lime and *surkhi*. The building has an influence of Victorian Architecture having pointed arches and carved wooden doors and windows. It has a flat roof with brick tiles



FIG. 61 DISTRICT COURTS
SOURCE: (PUDA, 2010)

and timber planks. Some of the parts of the building have been demolished and new judicial complex has been constructed.

The building has unsightly electric poles and wires in its vicinity. Some doors, windows and ventilators have been closed by placing the bricks. The entrance porch has been whitewashed which does not gel with the original red color of the building.

HEAD POST OFFICE

It was built in 1925. It is situated in front of New Rialto Cinema on Court Road. It is built of red bricks with lime and *surkhi*. It has got semicircular arches with huge pillars. The building is jinxed by the informal activities at the front. There are unsightly overhead wires and signboards.



FIG. 62 HEAD POST OFFICE
SOURCE: (PUDA, 2010)

RAM BAGH

Ram Bagh ,built by Maharaja Ranjit Singh in the sacred memory of Guru Ram Das Ji, was completed in 1831. Its design was influenced by Mughal concept. It has a square plan, which was later on modified by the British into an informal curvilinear plan. Its main focus is summer palace, which has been converted into Maharaja Ranjit Singh Museum. *Darshini Deori* is also an important unit from heritage point of view. Now some of the area has been encroached upon by various clubs, which are damaging the environment of the garden. The Summer Palace and Ram Bagh Gate have been taken up by ASI as Protected Monument as per the



FIG. 63 RAM BAGH
SOURCE: (PUDA, 2010)

Ancient Monuments and Archaeological Sites and Remains Act, 1958. It is one of the largest open spaces available within the city and is frequented by large number of locals and tourists.

RAILWAY STATION

The British constructed the Amritsar Railway station in 1931. It was the first railway station in the whole of Punjab. It is built in red bricks with lime and surkhi. It has an influence of Victorian architecture with decorative *jali* work and arches. Recently, the Indian Railway announced that Amritsar Railway Station would be upgraded and modernized as a World-Class station, having shopping centers, food stalls, restaurants, book shops, telephone and fax booths, medicine and variety stores and budget hotels as well as underground parking.



FIG. 64 RAILWAY STATION
SOURCE: (PUDA, 2010)

WAGHA BORDER

The Wagha border is a ceremonial border on the India–Pakistan Border where each evening a retreat ceremony called 'lowering of the flags' is held. Soldiers from India and Pakistan perform a flag march. Soldiers perform some drills and then gates between India and Pakistan are closed. To experience the retreat ceremony about 15,000 to 20,000 people visit the border every week. Wagha Border is located at a distance of 28 kilometers from the city.



FIG. 65 WAGHA BORDER
SOURCE: (PUDA, 2010)

FAIRS AND FESTIVALS

Amritsar is known as city of “Fairs and Festivals”. Large number of festivals are celebrated in the city to mark important social and religious events such as *Baisakhi*, *Diwali*, *Hola Mohalla*, *Dushehra*, *Ram Navami*, *Janmashtami*, *Guru Nanak Jayanti*, *Gurupurabs*, *Basant Panchami*, *Amavasya* and *Sangrand*. In addition, a *Langoor Mela* at Durgiana Mandir and *Maghi* are celebrated with great gusto and fervor. Major attractions include Diwali celebrations at Golden Temple, Baisakhi at Jallianwala Bagh and Guru Nanak Jayanti and Prakash Utsav of Sri Guru Granth Sahib Ji. Almost 4-5 lakhs people visit Golden Temple on *Baisakhi*, *Diwali* and *Guru Nanak Jayanti*. Apart from these, there is always rush on *Sangrand* (the first day of Hindu month). A mela is celebrated in Ram Tirath too for one week, which witnesses gathering of one lakh people daily. In addition to Hindus and Sikhs, large number of Muslims and Christians also visit the city. St. Paul’s Church built in 1853 and Jama Masjid (Mosque of Khair-ud-Din) built in 1877 are the most prominent locations frequented by them.



FIG. 66 FAIRS AND FESTIVALS

AMRITSAR CUISINE AS A PART OF HERITAGE/CULTURE

Amritsar - a traditional vibrant city – is known for its warmth & hospitality. Amritsaris are born hosts, and are famous for having a palate for eating. This is perhaps because frequent ravages of war shaped the Amritsari mindset where the dawn of the next day was not sure.

The city is famous for its culinary delicacies like multi-layered *prathas*, *channa bhatura*, *tandoori kulchas*, *puris*, jam, marmalades, *sharbat*, *rabri* & *lassi*. Other delicacies include *satpurus*, *samosas*, fried fish, *seekh kabab*, *mutton tikka*, barbecued chicken and spicy pickles. The specialized Amritsari Kulcha (baked) is prepared in Amritsar city only, and is not available or prepared even at a distance of 15 kms from the city.

The celebrated *papad* and *vadian* from Amritsar have become the subject of many a rhymes and jingles. Amritsaris have a sweet tooth for *pinnis*, *balushahis* and *gur ka halwa*. The city has many places for traditional cuisines and modern foods. Most of the eating joints of the traditional cuisines are within the walled city.

STRATEGIES FOR PROMOTING DEVELOPMENT OF AMRITSAR

THE WALLED CITY

The walled city has a total area of 350 hectares, which constitutes merely 2.5 percent of the area of the Amritsar city. It houses approximately 16% of the population of the city. However, the Walled City, Amritsar has a unique quality of growth and development. It has the distinction of housing the major cultural and religious landmarks. In addition, it is also the hub of trade and commerce and symbol of Amritsar City. Accordingly, Walled City needs to be considered as the first layer of the entire planning area, being its heart and soul. Considering the historicity of the area due to the presence of Golden Temple, Jallianwala Bagh, Durgiana Mandir,

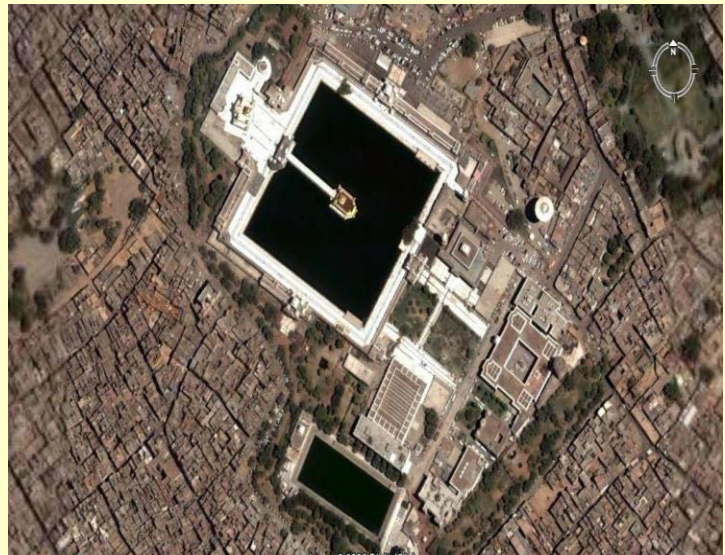


FIG. 67 THE WALLED CITY

Katras, Bungas, Havelis of historical times, narrow streets and specialized markets, walled city deserves to be preserved, conserved and up-graded in terms of infrastructure in order to make it a cultural hub. Considering the inherent strength and value of walled city, as the symbol of physical, social, economic and historical growth, it is desirable that walled city should be designated as “**Conservation and Tourism Area**” to be developed to preserve the existing rich heritage.

City of Amritsar needs to take drastic administrative steps and launch innovative planning and development initiatives, to make walled city a Heritage City in true and real sense of the term. Amritsar needs to be divided into two distinct layers for planning and development, involving area inside and outside the walled city. Walled city needs to be planned and developed as pedestrian city with entry of all commercial and personal vehicles banned into the inner layer.

Mobility within the walled city should be in the form of electric trolleys/ limited number of rickshaws to cater for the senior citizens, physically challenged, sick, children ,women etc and for transporting goods. All metalled roads within the walled city should be replaced by pavements to make it truly pedestrian and restore the aura of 19th century in the city . No additional parking should be created and multi-storeyed parking already created should be closed immediately to minimize damage to Golden Temple due to carbon emissions generated by vehicles parked in the walled city. To meet parking needs of the inner city, parking outside the twelve gates should be created with vehicular traffic restricted on the circular road. All overhead wires within the walled city should be made underground. Signage's, on the international pattern need to be designed to replace the hoardings and advertisement to minimize visual pollution. Walled city needs to be given a facelift by reshaping the building facades by involving eminent urban designers. Walled city must be made tourism hub by encouraging people to offer bed and breakfast facilities to help tourists stay longer ; enjoy Amritsary food, understand and appreciate Amritsar living and warmth of Punjabi hospitality. This calls for preparing Master Plan exclusively for the walled city, to rationalize its growth and to save the heart and soul of the historic and heritage city of Amritsar Accordingly, following strategies are proposed for the walled city of Amritsar:

- To preserve, enhance and promote the basic character of the Walled City
- To promote quality of life by improving, upgrading and providing state of art infrastructure and services.
- To undertake selective de-congestion of the walled city by shifting of wholesale and bulk material markets including Fish/Iron Market, Cheel Mandi, Iron Market (Bagh Akalian), Goldsmith Market, Ghee Mandi, Namak Mandi, wholesale medicine market, building materials, etc. to identified planned areas outside the Walled City near Bhagtanwala Gate/along the major road and rail networks.
- To promote de-congestion by eliminating sub-division of land and change of land use from residential to commercial and others.
- To promote revitalization of walled city area by way of conservative surgery.
- To frame detailed “Urban Design Guidelines” for promoting and enhancing the quality of urban spaces.
- Shifting of the Goldsmiths market/ activities operating near Golden Temple in order to minimize the damage caused by them to the world heritage monument “Golden Temple”
- To promote conservation and preservation of identified heritage buildings
- To promote Heritage Walk by developing processional route of Maharaja Ranjit Singh from Ram Bagh Garden to Walled City and its surroundings areas.
- Provision/ Up-gradation of higher level of urban and tourist infrastructure
- To promote, preserve, enhance and augment the bazaar culture in the walled city in order to make it a role model of urban heritage.
- To minimize vehicular pollution by promoting electric based and other non-polluting mass transportation system.
- Pedestrianization of the walled city in order to decongest and eliminate the traffic problems due to lack of adequate road width/parking.
- To promote pedestrianization by building special walkways on the stretch from Chowk Phowara to Golden Temple.
- Implementing time regulation for undertaking loading and unloading activity for existing wholesale markets within walled city area.

- To identify, create and develop available open spaces through proper landscaping within walled city.

Considering the critical role, historical importance and typical character of the walled city, it is proposed that it should be developed as a distinct entity. Accordingly, a specific, exclusive and detailed plan for the development of walled city needs to be prepared. The plan should be based on the prime consideration, having focus on Urban Design and Heritage Conservation & Preservation. Such a plan would be critical to preserve, promote and enhance the religious, cultural and commercial ambiance of the walled city besides improving quality of life and productivity of Amritsar Metropolis. The preparation of urban design/heritage development plan for the walled city needs to be taken up on priority on the pattern followed for the preparation of Development Plan of Char Minar area of Hyderabad. Already large numbers of development projects have been/ being taken up for the development of walled city by various parastatal agencies without any integration. It will be critical to integrate all these projects within a well-defined framework. Accordingly, preparation of such a Development Plan for walled city assumes importance considering the huge amount of investment and number of development projects being taken up in the walled city in isolation.

HERITAGE TOURISM

Heritage and Tourism has been found to have close and positive relationship which can be effectively leveraged in a mutually supportive manner. All over the world, the most sought after tourist destinations are the areas which have richness of manmade or natural heritage. It has also been established that Tourism has the highest potential for generating revenue and employment. Accordingly, it becomes important that Heritage should be used as a major revenue earner and generator of employment for its work force. However, this potential would largely depend upon



FIG. 68 HERITAGE TOURISM

how effectively we are able to preserve our heritage, ensure that development taking place in and around such areas is in total harmony with the existing Art & Architecture of the area and the existing buildings, with sufficient literature made available to guide the tourists. It would be critical that all those who are engaged in tourism industry are made aware of the need for preserving the heritage which would go a long way in promoting conservation. Amritsar, a city where the myth and history have woven a multi-coloured mosaic of secular heritage and traditions, the home of Harimandir Sahib (acknowledged as the fifth most desired pilgrimage destination in the world), Jallianwala Bagh, Ram Bagh and Gateway to India, housing numerous buildings related to various religions, offers enormous opportunities for promoting heritage tourism. With improved relations with Pakistan and softening of the international borders, upgrading the local airport to international level and increased trade and commerce with Pakistan, Amritsar is going to witness enormous inflow of tourists and traders across the border.

This potential needs to be fully exploited by creating appropriate level of tourism and trade related infrastructures.

CONCLUSION

Indian historic cities and settlements are complex and highly developed cultural resource entities. They show a wide diversity in their morphological character, being products of different geographical contexts, specific historic times, characteristics and functions. They have to be treated with sensitivity on the issue of development. The historic cities have to be viewed both as source and repository of architectural and technical knowledge. Prevailing developmental pressures faced by the city and its heritage need identification and rationalization on priority, in order to ensure that valuable heritage of Amritsar, is not lost in the haze of unplanned and haphazard development. Amritsar will remain valuable both for state and nation and accordingly, it needs a detailed agenda to be put in place for its integrated development both within and outside walled city.

Reduce the vulnerability of World Heritage properties and their settings as well as promote the social and economic resilience of local and associated communities to disaster and climate change through structural and non-structural measures, including public awareness-raising, training and education. Structural measures, in particular, should not adversely affect the OUV of World Heritage properties

LEARNING FROM PLANNING AND DESIGNING OF HAVELIS OF MALWA REGION OF PUNJAB AS A ROLE MODEL OF SUSTAINABLE BUILT ENVIRONMENT

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LEARNING FROM PLANNING AND DESIGNING OF HAVELIS OF MALWA REGION OF PUNJAB AS A ROLE MODEL OF SUSTAINABLE BUILT ENVIRONMENT

ABSTRACT; Traditional buildings are known for their valuable contribution to promoting the architectural vocabulary of India and visual interest they create. These buildings also known for their great learning and contribution they make to the knowledge and understanding about quality of built environment by showcasing their approach and sensitivity in planning, designing and construction of the buildings. Built in harmony with the nature, climate and environment, using local materials, these buildings define the principles based on which buildings needs to be designed to achieve sustainability. Sustainability in Havelis has been achieved by using innovative planning and design principles involving using renewable/non-conventional resources of energy and passive means of heating and cooling besides using locally available materials and local building technologies. Considering the prevailing harsh climate of Malwa region of Punjab, these principles help in providing ambient temperature and creating thermally comfortable living spaces, which remain relatively warm in winter and cool in summer. Modern buildings have been found to be anti-thesis to the principles followed in Havelis and are accordingly dependent largely on the use of mechanical means of energy to achieve conditions of thermal comfort in the buildings.

Buildings are known to be large consumers of energy and resources besides generators of waste. They are also known to have large carbon footprints. This makes built environment largely responsible for global warming. In search for appropriate solutions to make buildings sustainable and least consumer of energy and resources, paper tries to look at the principles, approach and the elements which have been adopted in the planning and designing of Havelis which have helped in making them highly energy efficient. Paper also tries to look at the salient features and special characteristics of the built form of **Havelis**, which has been evolved in response to local culture; climate and materials. Objective of the present research paper is to analyze the built form and salient features of planning, designing and construction of the Haveli. In addition, various in-built features used in these havelis, would be identified and analyzed in terms of their implications in spatial planning, designing and climatic responsiveness

INTRODUCTION

Traditional Built Environment: All traditional or historic buildings, large or small, complex or simple, make a contribution to our quality of life by informing us of our past and adding visual interest to the environment. Old buildings have historic interest because they reflect the lives and achievements of our ancestors. Traditional buildings are generally constructed with materials which are locally sourced. Such materials find little relevance and are rarely used in majority of buildings constructed today. Although prevailing political, social and economic factors are known to have influenced the design, quality and layout of our built environment, the main distinction between historic and new-buildings is the outcome of the fact that labour was

comparatively cheap in the past and the transportation of materials was difficult and expensive in comparison to today.

This difference between traditional and modern construction practice puts a value on all our historic buildings in terms of our cultural heritage, and as an irreplaceable resource. The Havelis survived for centuries because of their geometric, technical and constructive principles that largely promoted their sustainability.

Malwa Region of Punjab: State of Punjab is located in North Western part of the country. Based on the prevailing climatic conditions, state falls in the composite climate zone out of the five climatic zones into which India, as a nation, has been divided. State of Punjab is further divided into three distinct zones based on their location, culture, rivers etc namely **MAJHA**, **MALWA** and **DOABA**. Among three, **Malwa** region located in the Western part of the state, has the largest geographical area involving 12 out of 22 districts of the state namely Bathinda, Sangrur, Patiala, Fatehgarh Sahib, Ludhiana, Barnala, Ferozepur, Fazilka, Muktsar, Mansa, Moga and SAS Nagar. Western Punjab, with its harsh terrains and composite climatic conditions, invariably posed enormous challenges of comfortable living. To meet the climatic harshness, effectively and efficiently, people of the region adopted numerous innovative construction technologies to promote environment friendly buildings for comfortable living. Some of these residential buildings distinctively emerged in the shape of **Havelis**. The present research paper has focus on Havelis of Malwa region of Punjab.



FIG. 69 MALWA REGION, PUNJAB

HAVELI

A clear definition of Haveli is not available but its origin has been traced to m"Hawaleh" meaning "allround" or "round about". It appears as if the Mughals used this term for defining a piece of land like the English term, "estate". So far as the physical definition is concerned, it can be said that Haveli is a medieval dwelling with a courtyard or a bigger mansion within. The Havelis of Northern and North-Western India are perhaps the most popular typologies of courtyard houses in India in general and in the states of Gujarat, Rajasthan and Punjab in particular. The robust nature of Havelis in Punjab reflect the psychology of the people who built them, relying primarily on security, for safeguarding their families from the Muslim invaders. Courtyard has been found to be the major element of the design of havelis with their numbers varying from single to multiple. In majority of the cases, Havelis have been planned and designed with open verandah in the front, facing the street/road. Generally a large room in the shape of a baithak (Drawing room) was provided for the use of meeting and socialising of males and for gathering and entertaining guests. The features used for providing openings in the buildings like doors and windows were intricately ornamented. Main entrance door is found to be most vital for the house and accordingly was usually fabricated from solid wood. This door



FIG. 70 VIEW OF HAVELI AT BAGHRIAN (SANGRUR)

is generally divided into rectangular planes or engraved panels. Considering the prevailing poor quality and scarcity of water available in the region, practice of Rainwater harvesting has been used extensively in the havelis, with storage provided in the courtyard. Havelis, as has been said, are known for their architectural features, various unique architectural features that have been incorporated in this haveli have been identified and analyzed in terms of their implications in spatial planning, climatic responsiveness and other aspects.



FIG. 71 PUNIA HAVELI, ABOHAR



FIG. 72 HAVELI AT KOTAKPURA, (FARIDKOT)



FIG. 73 PUNIA HAVELI, ABOHAR (FAZILKA)



FIG. 74 PUNIA HAVELI, ABOHAR (FAZILKA)



FIG. 75 PUNIA HAVELI, ABOHAR (FAZILKA)



FIG. 76 PUNIA HAVELI, ABOHAR (FAZILKA)

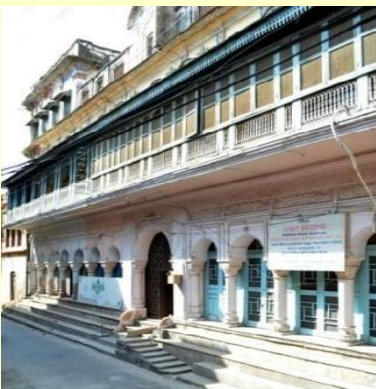


FIG. 77 PUNIA HAVELI, ABOHAR (FAZILKA)



FIG. 78 PUNIA HAVELI, ABOHAR (FAZILKA)

Spatial organization: These Havelis located in Malwa region of Punjab, has a typical desert climate where during the summer temperatures ruled as high as 48°C and during winters as low as 1°C. The main feature of the spatial organization of the Havelis is symmetrical planning worked around two courtyards which delineate clearly public and private spaces in the house. Typically the front section of Havelis, which is more open to the exterior and therefore is predominantly used by men of the house. The area is known as *mardana*, while the rear portion which is carefully set away from the entrance is reserved for exclusive use of the women of the house and was known as *zenana* area following the Indian traditions.

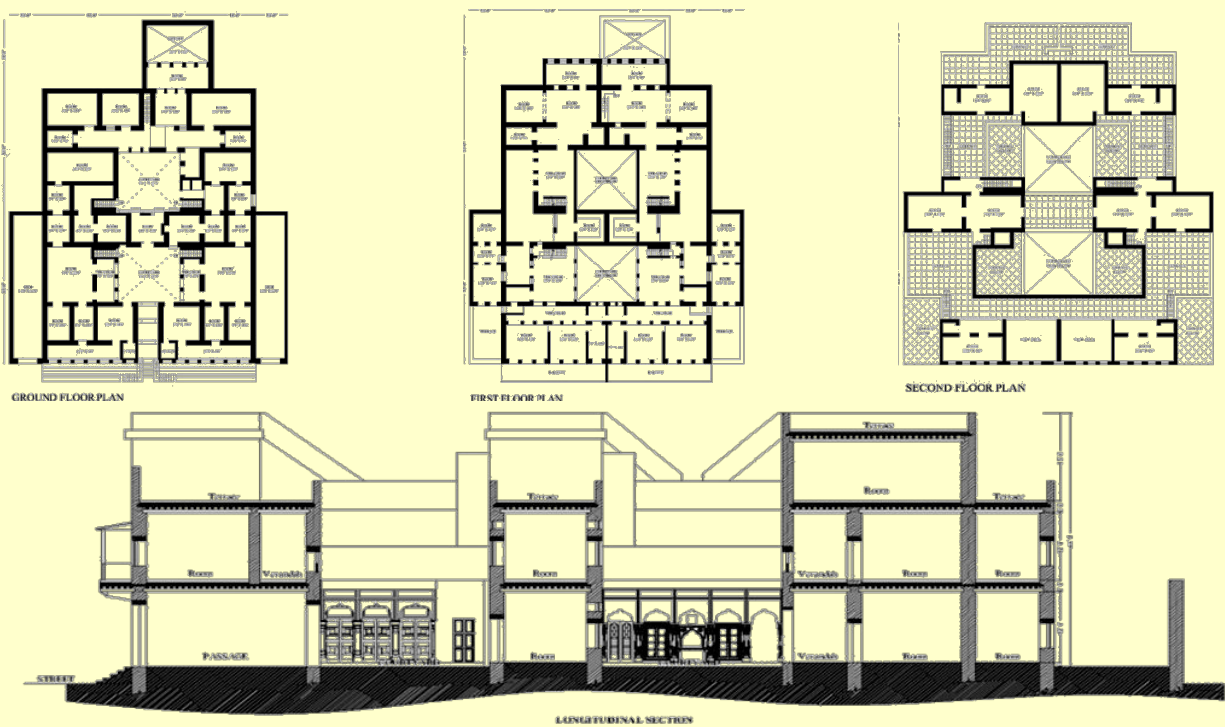


FIG. 79 FLOOR PLANS AND SECTION OF HAVELI IN MALWA REGION, PUNJAB

Courtyards and Terraces: Courtyards and Terraces on different levels are most fascinating features of these Havelis which not only define the perfect spatial organization, but are also the centre for rituals, marriages, festivals and social gatherings. Courtyards, nearly square in shape give connectivity and acted like a bridge for areas or spaces inside and outside. The vertical part encloses courtyards and defines their volume. The elements like arches, niches, fireplaces, cornices make this space lively. Well placed and well proportioned courtyards at all levels also serve as micro-climate modifiers due to their ability to mitigate high temperatures, to channel breezing and thereby adjusting the degree of humidity. During summer time, throughout the day, they provide shade and in combination with the thick external walls delay the heat gain. During night, warm air rises and exits from the courts. The cool air enters to supplant the exiting air to maintain pressure. Hence, during hot day, cool air gets circulated into the rooms and the courtyards turn into a source of fresh and cool air. These aspects clearly reflect sustainable character of Haveli. Plans of the Havelis showcasing the positioning of the Courtyards and spatial distribution are given below;



FIG. 80 COURTYARDS AND TERRACES IN HAVELI OF MALWA REGION, PUNJAB

Room size and Massive walls: In the Haveli, majority of the rooms on the ground and on the first floor face inwards and are dependent on the courtyards for daylight. Longer sides of the rooms lie along the courtyard and their depth is comparatively shallow. The walls of this Haveli are massive with thickness varying from 18" to 27". The walls are constructed with Nanakshahi bricks, mortar of lime and surkhi. Thermally thick wall construction is part of the climate responsive strategy for meeting the challenges of climate during periods of extreme heat and extreme cold. Thick walls are known for their quality of not only providing insulation but also act as place for managing heat. Courtyards help in rationalising and reducing the flow of outside heat into the building during summers, due to solar radiation. During the cool period a part of the stored heat in the walls gets released to the interior. This results in the minimization of temperature change inside the Haveli. During winters, heating requirement is reduced due to radiating of the heat stored in the walls during the night.

Verandahs, Overhangs and Balconies: Verandahs are planned and located at the entrance and around the courtyard, shading the peripheral rooms. They function as a transitional space between enclosed rooms and outdoor spaces and also provide shade to the walls reducing heat gain. Verandah, on the southern side, is the most effective building element which allows the sun to reach the interiors in winters, and prevents it in summers. Fenestrations provided at different levels in the shape of projections, shield the Haveli from direct solar radiations & reduce heat gain. The depth of balconies and overhangs minimizes the solar radiations in summer but allows the winter sun to enter into the house. Projected balconies provided in front of havelis in the shape of large openings prevent solar radiation entering the rooms whereas balconies on the first floor remain blocked by wooden jaali to create privacy and block the view from outside of the street.



FIG. 81 VERANDAHS, OVERHANGS & BALCONIES IN HAVELI OF MALWA REGION, PUNJAB

Heavy roofs, High ceilings; Heavy roofs and high ceilings are the other distinct planning, designing and construction features of the Havelis. Planning havelis with due considerations to orientation coupled with mutual shading, walls stand protected from solar radiations. The thickness of roof varies from 15" to 18". The flat roof is generally made of timber. Timber being bad conductor of heat does not allow heat gain throughout the day. Greater ceiling heights of 14' to 18' improve environmental conditions in summer time by permitting warm air to rise. More room heights increase the volume of the enclosed space, helps in creating considerable time lag taking for the internal air to get heated as compared to the buildings with low height ceilings



FIG. 82 HEAVY ROOFS AND HIGH CEILINGS IN HAVELI OF MALWA REGION, PUNJAB

Openings and Ventilators: Rationally planned and placed openings and ventilators ensure adequate air movement in the built space through the openings and accordingly provide thermal comfort at higher temperature. These remain efficiently shaded from direct solar radiation. However, in winter when there is no special need for air movement, window apertures are opened during the day to store the thermal radiation and these are kept shut at night. Windows also provide sufficient daylight into the interior. Ventilators are prominent features in these Havelis. These are manually operated and stand provided just below the ceiling. The warm air, being light, rises and leaves through these ventilators. The cool air from the courtyard enters into rooms thus creating the stack effect. A typical ventilator near the ceiling increases the velocity of air entering into the Haveli and results in lowering of the pressure at the ceiling level, thereby inducing the hot air under the roof to flow out. Ventilators also function as clearstory windows to lit up the interior spaces not having any exposed surface to admit light through window openings.

Surface texture and colour: It has been observed that textured surfaces are used in the exterior finish of the Haveli facades, which are exposed to sun. The walls are finished with lime and stucco plaster. The façade of the Haveli is treated with stucco on motifs and floral patterns made up of lime plaster. The external surface of the Haveli is painted with light colors that reflect solar radiation in order to have minimum absorption. Whitewashing reduces the absorptive property of the wall surface, minimizing the effect of solar radiation on internal climate and tends to stabilize the inside temperature.

Observations: Looking at the entire context, it has been observed that while promoting the climatic responsiveness of Havelis, principles of planning and designing for managing solar radiation and day lighting etc were precisely worked out and followed during construction. Natural and passive means has been employed for reducing dependence on mechanical energy.

Thermal comfort has been achieved through incorporating numerous design features like providing internal courtyards, balconies, ventilators, orientation, a thermal mass and solar gain. It highlights the construction methods and skills for using locally available materials. These observations would be theoretically and practically useful to the professionals working in the field of Climatic responsive Architecture.

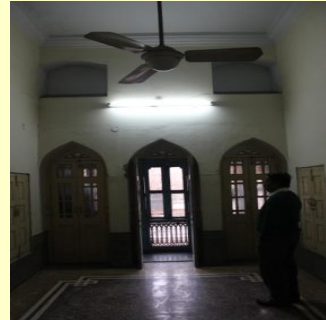


FIG. 83 OBSERVATION ON USING NATURAL AND PASSIVE MEANS IN HAVELIS

Conclusion:

Careful and thought planning of the Havelis with courtyards, its construction with locally available materials, its immunity from the harshness of summer- winter seasons, its naturally controlled flow of air and openness for natural light, reducing dependence upon mechanical energy constitute cogent proofs of its sustainability paradigm. Combination of the various features has helped in providing comfortable environment to the inhabitants. Variety of spaces like open, semi- open and enclosed is being used during daytime in different seasons. The courtyards ensure ventilation in the building. Outside verandas and balconies covered with wooden windows help in reducing the heat intake from south -west side. They serve as buffer space between the interiors and the outside environment. Exterior walls appropriately protected from the sun with various elements cool the building interior. Building components and spatial layering in the Haveli helps in the reduction of heat intake. The greater ceiling height increases the volume of the enclosed space thus taking more time in heating up the internal air. There is considerable time lag due to thick masonry walls and heavy roof construction. The openings such as windows, ventilators provide cross- ventilation which helps in creating stack effect. Building mass reduces the heat gain in summers. Its harmony with the environment and prevailing climate, both physical and social along with its solidity and intactness, clearly demonstrate that even after decades of construction, these buildings remain highly sustainable. In order to create sustainable built environment, wisdom of our past in all areas of human life should be optimally used in the present also. The Architectural wisdom as we find enshrined in the architectural fields of the past which surely include Haveli beckons us to move intelligently and wisely while building structures which we need in the present time. Obviously these Havelis has significant lessons for modern day construction typologies. Such studies provide necessary insight and lessons to the Architects for achieving the goals of creating energy efficient and sustainable design solutions in their professional ventures. Traditional buildings are not just remnants of the past, but great lessons for the future of mankind. So the need for making present day built environment sustainable may well be served by using climate responsive designs grounded in traditional architecture.

DISCOVERING AMRITSAR HERITAGE-AGENDA FOR ACTION

Ar. J.K.GUPTA



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DISCOVERING AMRITSAR HERITAGE- AGENDA FOR ACTION

INTRODUCTION

Cities have been part of the human history. They have globally showcased the growth and development of communities and nations over the ages. They are the embodiment of human glory and its creation. Accordingly, cities are the containers and reservoirs of human march in the domain of the built environment- known as the heritage. Heritage, in the urban parlance, remains both a moral and material entity representing personality, traditional and historic fabric of the city and the society. It is also known for its role and importance as connector of the past with the present and future of any city and definer of the evolution of a society. Known as the depicter of the past glory, ancient culture and way of life, heritage is known to be expression of identity, definer of physical, social and economic edges of a society of a particular era. Combining both tangible and natural elements, built heritage remains the keystone of our culture and our inheritance showcasing what past gifted us, what we value in the present and choice we make to preserve for future generations. Accordingly, preservation and conservations of heritage for posterity assumes importance. It helps us examine our history, traditions and developing awareness about ourselves. Known to energise the communities and the neglected areas, heritage has the potential to generate a greater sense of pride and belonging in the local area. Heritage besides social, physical and cultural connotations has enormous potential for promoting economic development and removing poverty by leveraging employment through innovations in tourism, entertainment and business.

Looking at the context of built heritage in the state of Punjab, Amritsar metropolis appears to be the forerunner among all the cities of the state in housing wealth of such heritage. Treading history spanning over more than 435 years Amritsar remains the premier city with its glorious religious and political footprints. With Golden Temple, symbolizing the spiritual heritage, Amritsar occupies a unique place in the history and geography of the state and the nation.

Rapid growth of Amritsar has its genesis in the Sikh misls during the latter half of 18th century ; reconstruction of Harimandir Sahib, holy tank and parikarma besides

coming up of katras, bazaars, gardens and havelies, to give city a distinct form and dimension. Majority of existing built heritage in Amritsar owes its origin to Maharaja Ranjit Singh, greatest builder of his time, who is credited with developing Amritsar as his summer capital and making addition in the shape of a masonry wall having 240 watch towers and 12 beautiful gates to safeguard the city from invaders ; Gobindgarh Fort built as his additional treasury; creating



FIG. 84 HARMINDER SAHIB
SOURCE: (HINDU-TEMPLES.COM. 2019)

Rambagh, a beautiful garden spread over an area of 84 acres on the pattern of Shalimar Garden of Lahore and building 25 gardens spread all over the city. City of Amritsar owes its unique personality and distinct culture to the specialized markets for food, retail and wholesale which came up around Darbar Sahib; typical structure created for residence and business for housing the inhabitants; cultural institutions which made city as their base; educational institutions like Khalsa College and religious complexes like Durgiana Temple which enhanced the spiritual ambiance of the city.

However, over a period of time, with the partition of India and sub-division of state of Punjab, large number of migrants made Amritsar as their preferred place of residence. Under the enormous population and development pressure, city underwent rapid growth and development, majority of which was unfortunately both haphazard and unplanned. Rapid unplanned development impacted adversely areas both within and outside the city. However, major impact came to area housing the city heritage. Core area of the city has undergone intensification of built area, change of land use, use of material and encroachment on available open spaces, threatening the very existence and character of built heritage. This calls for evolving appropriate strategies and framework for action for the conservation and preservation of the valuable built heritage of Amritsar.

AGENDA FOR ACTION

Growing from a small village, Guru-Ka-Chak/Chak Guru Ram Das, focal point of Sikh faith, rightly called Sifti da Ghar (the Home of all Virtues), Amritsar today enjoys the status of a metropolitan city with population spanning over one million. Commanding a central position in North-Western India and gateway to the Middle-East, Amritsar enjoyed the status of a thriving trade centre in the Region in pre-independence era. However, post-independence scenario emerging from partition of the country made the premier city of the state as the border town, adversely impacting its economy, trade, commerce and population in numerous ways. It is said that more than 1/4th of the total buildings were damaged/destroyed during riots in the partition of India. Accordingly Amritsar has suffered enormously due to its positioning on the border and hostile neighbors. Despite all hostility, city has not lost its grandeur, culture and position of power in the state. Being the home of Golden Temple and Jallianwala Bagh it attracts large number of visitors on regular basis. Amritsar has always occupied a prominent place on the visitors list, both of dignitaries and ordinary mortals. It has emerged as an important tourist destination. Walled city with 12 gates has always been full of life with a typical culture of business and living. Considering the existing scenario of Amritsar there are large number of issues which are impinging on not only the rational growth of the city but also adversely impacting the heritage buildings and areas surrounding them. In order to protect such areas and to promote their development following agenda for action is suggested.

REDEFINING HERITAGE

In order to ensure effective preservation and thoughtful conservation, it is important that first of all efforts should be made to clearly identify and define what comprises the built heritage. At present entire process of identifying the heritage is done under the ambit of national and state

laws enacted to protect it. It would be worthwhile to look at the definition enshrined in these Acts of the built heritage;

Any structure, erection or monuments or any tremulous or place of internment or monolith which is of historical, archaeological or artistic interest which has been in existence for not less than one hundred years.

Thus heritage in the context of law must be more than 100 years old before it could qualify for protection and preservation. This excludes enormous wealth of built heritage created during the last 100 years period out of the purview of these Acts. Heritage includes objects, spaces, buildings which are of exceptional quality and merit which qualify to be preserved and conserved. Thus, in generic sense of the term it cannot be solely linked to the time dimension because time is one of the element and not the sole criteria to determine the value of any object. Accordingly, it calls for amending the definition so as to include the built heritage created during the last 100 years within the ambit of existing laws in order to ensure its preservation and conservation. Out of 63 protected monuments in the state of Punjab, Amritsar has only one such monument (Rambagh) despite having wealth of built heritage. In the absence of clearly laid down guidelines for evaluating buildings there is no objectivity in listing of the buildings and accordingly the entire process of identifying such buildings suffers. These Acts need to be amended by including detailed criteria and guidelines for identifying the built heritage which would go a long way in facilitating the process of identifying the built heritage and help its proper preservation and conservation.



FIG. 85 KHALSA COLLEGE
SOURCE: (SIKHIWIKI. 2020)

Manmade heritage in the Indian context has very narrow connotations as it is only buildings specific and not area specific. City spaces have been, by and large, excluded from the purview of the Act. Thus in majority of cases individual buildings have been taken care of but city or urban spaces have been ignored. In order to preserve the sanctity of the historical buildings and to maintain the basic character of the area it would be desirable to enlarge the scope and ambit of the Act by extending their operational areas to include urban spaces. Incorporating concept of heritage cities or zones for ensuring preservation and protection of manmade wealth would be critical for not only ensuring orderly growth and development of the area and buildings like Golden Temple, Jalianwala Bagh, Durgiana Mandir etc. through conservation but also minimizing misuse and distortions which have been perpetuated on these areas by excluding them from the scope of the Act. **Accordingly walled city of Amritsar needs to be declared as the Heritage Zone in order to ensure its comprehensive preservation, conservation and development.**

Town Planning Laws

In order to ensure effective conservation and preservation, it would be desirable that the heritage should be made *an integral part of city planning and development process* so that promoting the cause of heritage should be one of the key objective of city planning and development process. State government has so far amended the Punjab Regional and Town Planning and Development Act 1995 in the year 2003 making Heritage as an integral part of the development process. However, major urban development laws like Punjab Municipal Corporation Act, Municipal Act, and Improvement Trust Act etc. are yet to be amended to include heritage as an essential ingredient of local development. **Unless and until all urban related laws are amended to include heritage conservation and preservation as an integral part of urban and rural planning, development and management process, it would be rather difficult to save our precious heritage. Despite the fact that the Punjab Regional and Town Planning Act has been amended but no heritage related development regulations have so far been prepared. Without the preparation of development regulations, conservation of heritage would become rather difficult.**



FIG. 86 CORPORATION BUILDING
SOURCE: (AMRITSARCORP. 2020)

Master Plan

With the invasion of automobiles and rapid increase of population with a very high density within walled city, Amritsar, the heartbeat of Majha region and rich repository of spiritual and national heritage, has witnessed large scale degeneration in quality of life. Large number of slums have grown along the wall right at the 12 entry gates and have adversely affected the city life and its functioning. With narrow streets, massive sub-division of urban properties, large concentration of population, increasing number of automobiles within the congested walled city, numerous developmental problems are being witnessed. It is not only the walled city which has become the hot bed of unregulated development but most of the development around the walled city has also been disorderly. In the absence of proper direction and management, city of tomorrow is suffering from a syndrome of unplanned, unregulated, haphazard and unauthorized development. In fact illegal development has emerged as the order of the day. On this account city growth and development is marked with a quality which is both sub-standard and haphazard dotted with dualities and contradictions. This calls for putting in place an appropriate planning and development framework in the shape of a Master Plan in order to guide future development of the city. State Government has already initiated the process of preparation of Master Plan for the identified planning area which includes large portion of District of Amritsar. However, preparation of Master Plan for Amritsar needs to be accorded highest priority for not only guiding its future development but also preserving and conserving its valuable heritage. In order to make the development plans as instruments for heritage conservation, it would be important that **Master Plans, Development Plans, Regional Plans, District Plans or Metropolitan Area**

Plans evolved at the local, district or regional level must identify the areas of art, architecture, cultural and historical importance and also suggest appropriate strategies for achieving the objective. In fact Master Plans/Development Plans etc. must **devote a complete chapter to the heritage of the city** so as to clearly identify the objects, areas to be preserved, problems faced in preserving the same and strategies suggested to ensure their proper preservation. Such an approach would go a long way, in achieving the objective of effectively managing the built heritage. **In addition, a Comprehensive Plan for the entire walled city of Amritsar should be prepared based on detailed studies for restructuring the historic core, on the pattern of Hyderabad in order make the area a vibrant entity and pedestrian paradise.** Study should aim at identifying actions necessary to restore and enhance the visibility of key heritage monuments to bring about a holistic tourist experience and to promote tourism as an engine to bring resurgence and rejuvenation of the local economy. Entire walled city needs to be digitally mapped using IT and IT related services for creating accurate database and base plans for evolving development plans and for planning of services and infrastructures.

Strengthening of Amritsar Development Authority

Due to the absence of a unified agency in the past for planning and development, the planned growth of the city, a showcase of composite culture and secular heritage having glorious past and promising future, has suffered enormously. Numbers of agencies have been found to be operating without any co-ordination and without any operational framework. All these agencies have used the city as a place for generating money with little or no contribution made towards its development. In fact most of the agencies have operated in a manner which has largely harmed the city growth. In the given circumstances, for promoting orderly growth of the city of Amritsar, **Amritsar Planning and Development Authority has already been set up by the State Government with area coverage spanning the identified planning area.** However, in the given structure it is impossible for Amritsar Development Authority to take care of the city level developmental needs including its heritage. Accordingly, for conserving the footprints, authority would require strengthening in terms of technical trained manpower particularly in the area of built heritage and fiscal resources to take care of the needs of the planned development of Amritsar. City Development Authority should be vested with the authority and power to regulate all issues related to orderly planning and development, heritage conservation with no development allowed without the prior approval of such authority including by any state/ central agencies. Merger of Improvement Trust, Amritsar into the Amritsar Development Authority could be considered as one of the option to upgrade/improve the operational efficiency of the authority. The authority should also be declared as the technical arm of the Municipal Corporation Amritsar to look after the entire planning and development of the area falling within Corporation limits

Development Controls/Heritage Regulations

For orderly development of the city and the area surrounding its heritage area, it will be critical that a well defined set of rules and regulations are immediately put in place in the shape of development control and heritage regulations. It has been observed that normal set of rules and regulations donot do justice to the rational development of such critical areas. Since heritage buildings have unique characteristics in terms of their design, materials, construction

technologies, relationship between built and open spaces, solids and voids, height etc, accordingly preservations of such buildings require the definition of specialized system of rules and regulations. Globally, cities known for their heritage, have evolved dedicated heritage regulations and development control to retain the basic character of buildings and the area where they are positioned. In India very few cities have worked on this agenda. However, Town and County Planning Organization, Government of India, has come up with model regulations for the heritage areas. These regulations need to be considered for adoption for core area of Amritsar, with appropriate modifications. The existing building by-laws applicable in Amritsar municipal corporation do not include appropriate provisions for management of heritage areas and are not capable to respond to the challenges faced by heritage. They need to be amended on priority.

Heritage Commission/Committees

The root cause of major maladies in preservation and conservation of manmade heritage in India has been the absence of proper system and rational approach to identify the heritage. In the absence of proper machinery to undertake the task, the entire approach to subject matter is both adhoc and subjective. It would be desirable to constitute **“Heritage Commissions”** at the centre and state level. However, setting up of a **Heritage Conservation Committee** for Amritsar comprising of experts in the area of Heritage Conservation, Engineering, Architecture, Urban Design, Planning, Environment, History, Sociology, Law, Local Authority, NGOs, INTACH etc. would be critical to identify the valuable heritage of the city and for aiding, assisting, advising the

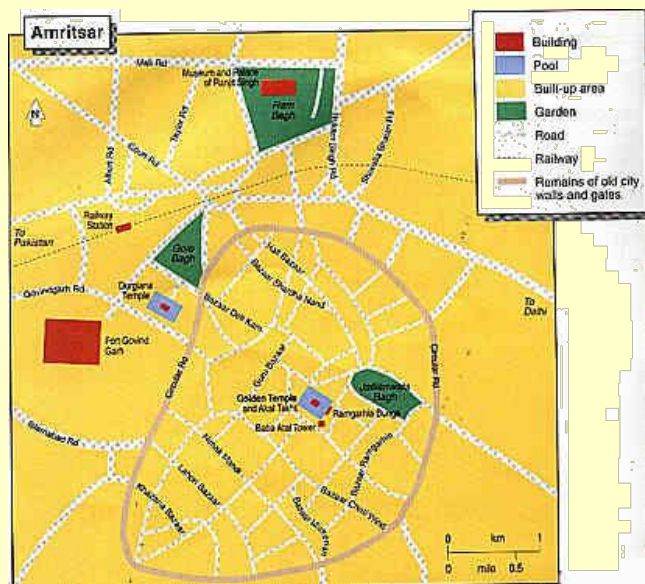


FIG. 87 AMRITSAR MAP
SOURCE: (PUDA, 2010)

Development Authority on issues related to development, construction, conservation and preservation, framing of special development regulation for heritage areas etc. Heritage Committee should prepare **Heritage Atlas** of Amritsar containing Heritage Maps of the city and other details of such buildings and spaces as has been done in the **Hyderabad city** in order to create awareness among the institutions, tourists and public at large. The task needs to be completed on a time bound basis in a phased manner. Heritage Committee must be provided with necessary technical, fiscal and trained manpower duly supported by the State Commission for scientifically completing the job. Creation of such Commissions/Committees would be a vital step in the direction of not only identifying but also effectively preserving and conserving the built heritage. Appropriate amendments need to be made in the National and State Laws for the creation of such Commission/Committees and by defining their powers, role and functions in accomplishing the task. Appropriate supportive machinery at the regional and local level needs to be created to facilitate their task. In fact Heritage Commissions/Committees should work as fulcrum around which entire mechanism of conservation and preservation should gravitate. In addition, it is proposed that **Heritage Cells** must also be set up within the state Department of

Town and Country Planning, PUDA and Local Government in order to ensure that all development schemes/master plans do take cognizance of the heritage related issues as an integral part of the development process.

Listed Buildings

In order to ensure the preservation and conservation of valuable manmade heritage it would be desirable to look at the concept of *listed buildings* followed in U.K. Under this concept, buildings of Architectural and Historical value, which require conservation and preservation, are identified at the city level. The onus of preservation and conservation of these buildings lies on the owners of such buildings. No structural or other changes, which impinge on the character of the building are permitted unless prior permission of local bodies or competent authorities is sought. For making any change, owner has to apply to the concerned



FIG. 88 HERITAGE HOUSE
SOURCE: (BEHL. 2020)

authority, which may be granted or refused after considering the individual merits of each case. Concept of *public hearing* followed in U.K. has played crucial role in promoting the cause of preservation and conservation of built heritage in the country. Concept of public hearing is based on the premise that heritage belongs to the community at large and not to the individual and accordingly its conservation and preservation should be community based. Concept of listed buildings have revolutionized the total concept of preservation and conservation of built heritage in U.K. Annually more that 18000 buildings are being added to the list. Thus concept of listed buildings needs to be adopted in Amritsar also. In this direction, number of attempts have been made by various individuals and institutions for evolving a list of heritage buildings. All these efforts needs to be consolidated so that a comprehensive list of heritage buildings becomes available which could be further levered to evolve strategies for their conservation and preservation.

Schemes for Promoting Built Heritage

Development Authorities launches many schemes for the development of new residential, commercial, industrial, institutional areas, but so far very few schemes for the development of built heritage have been prepared. It would be desirable that exclusive *schemes for the development of built heritage are prepared* for Amritsar so as to provide necessary thrust in the direction. These schemes should exclusively cater to the requirements of planning, development and management of heritage areas and should ensure their proper funding and implementation on the ground. However, *schemes for development of built heritage could be combined with schemes for development of new areas and funds generated from the development of new areas could be used for the development of heritage buildings or areas.* Such an approach

would not only help in integrating the development of built heritage and new areas in Amritsar but would provide necessary financial resources for these projects. Amritsar offers enormous opportunities in this direction keeping in view its rich repository of spiritual and national heritage in terms of Gurudwaras, temples, mosques, churches, bungalows, theatres and galleries, parks and gardens, archives and libraries, art and architecture, museums and memorials, havelis and forts, fairs and festivals, narrow lanes and winding alleys and bustling markets and lip-smacking cuisine.

Public Participation

Absence of an effective mechanism of public participation in the process of preservation and conservation of built heritage has been the root-cause of damage and destruction of valuable built heritage. Heritage is created by the society and accordingly onus of its preservation and conservation must also be shared by it. Non-involvement and lack of awareness on the part of the people about the built heritage has caused enormous loss to it. ***Though Constitution of India under fundamental duties prescribes protection of heritage as one of the important duty of each citizen but no effort has been made to make people aware of this. Efforts must be made to make the movement of preservation and conservation of heritage as the people's movement by involving each and every citizen right from a small child to a grown up adult.*** Subject matter of heritage must be made an integral part of study curriculum so as to imbibe the habit of conservation at the student stage. Architects and Planners have an important role cast for them in the area of Heritage Development. Accordingly Heritage conservation and preservation should be included as a compulsory subject of study in all Architectural and Planning Institutions in order to sensitise all Architects and Planners during their process of education. Voluntary agencies, NGOs and pressure groups have important role cast for them in safeguarding and promoting the cause of built heritage. City authorities must bring out pamphlets, maps and brochures highlighting the heritage of their cities so as to make people proud of it. This would help in creating competition among different settlements in the context of preserving its heritage and would help in achieving the end result. In India INTACH has done a commendable job in this area, creating awareness among masses and involving them in the process. In Ahmedabad awareness has been created among the community through the mechanism of organizing ***Heritage Marches and Heritage Exhibitions*** at the city level. Valuable contributions can also be made by the Indian Institute of Architects, Institute of Town Planners, Institutions imparting education in art, architecture and planning, in the area of heritage, which should become role model for other institutions to emulate. Expertise available with Guru Ram Das School of Planning and Architecture of the Guru Nanak Dev University needs to be effectively leveraged to rationalize the future growth of Amritsar besides protecting, preserving and promoting built heritage.

Heritage Fund

It would be desirable that ***heritage fund*** at the national and state level is created, so as to generate enough resources for the conservation and preservation of built heritage. Donations to the fund must be fully exempted from the incidence of income tax. Further all foreign tourists visiting India must be levied a tax on the pattern of education cess which should form part of the

heritage fund. Similarly part of income generated from the fee collected from visitors of historical buildings should also go towards augmenting the heritage fund. Prominent artists should be involved in raising funds for this purpose by organizing charity shows. The heritage fund should be used in promoting research and development in the area of conservation and preservation besides providing financial support in maintenance and upkeep of buildings listed as built heritage. For generating appropriate level of resources for Heritage, State Government should consider the option of starting a **Heritage Lottery, Levy of Special Heritage Cess, earmarking 10% of the annual development budget of Amritsar Development Authority and Municipal Corporation** for Heritage purposes. In addition, **Industrial houses, Corporate Sector, CII, PHDB and International Agencies** could be actively involved in making available resources for Heritage Conservation and Preservation.

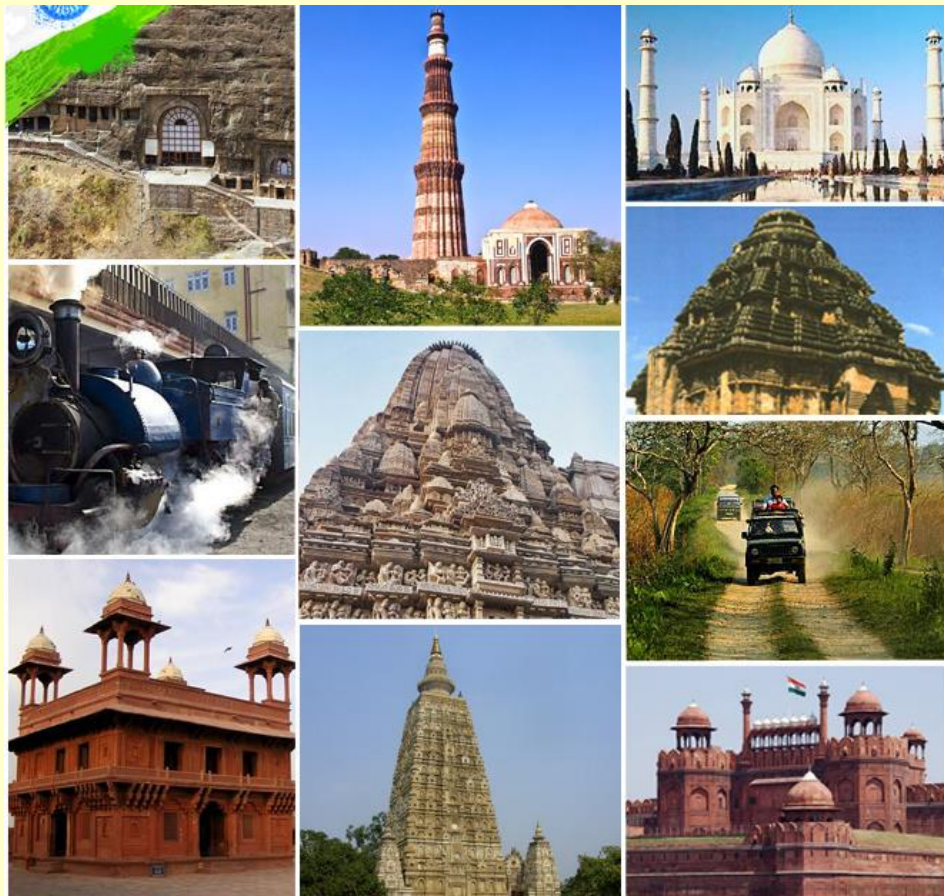
CONCLUSION

All cities remain unique, hosting lot of wealth created over a period of time in the shape of built environment. Cities in general are facing lot of challenges in terms of rapid development emerging out of urbanization, massive population growth and migration. Pattern of emerging growth and development of cities remains a cause of concern because it does not value its heritage. Most of the development is driven by individual and commercial interests. Valuing heritage has no place in such pattern of development. City of Amritsar is also suffering from such a development paradox.

In the given context, it becomes critical that history, geography, morphology and cultural components of Amritsar heritage are carefully studied and analyzed before solutions for its preservation and conservation are put in place. Considering the present political, economic and developmental scenario, Amritsar is going to witness a new resurgent era of enormous growth and development with lot of investment flowing into the city and large number of people coming into the city. Real estate values are going to rise sharply resulting in rapid conversion of land uses and enormous development pressure on the city and its existing inadequate infrastructure. The pressure would be more pronounced within the walled city which houses most of the valuable heritage. How these developmental pressures are rationalized and channelised for promoting the orderly growth and development of the city and its heritage, would hold the key to the future of the city and its unique position in the state and nation, as the home of all virtues, heartbeat of majha and repository of spiritual and national heritage besides religious, financial, political and cultural capital of the state of Punjab.

Reduce the vulnerability of World Heritage properties and their settings as well as promote the social and economic resilience of local and associated communities to Disaster and climate change through structural and non-structural measures, including public awareness-raising, training and education. Structural measures, in particular, should not adversely affect the OUV of World Heritage properties

PROPERTIES IN INDIA INSCRIBED ON THE WORLD HERITAGE LIST



Source: MapofIndia.com

Jit Kumar Gupta
Yamini Gupta

PROPERTIES IN INDIA INSCRIBED ON THE WORLD HERITAGE LIST

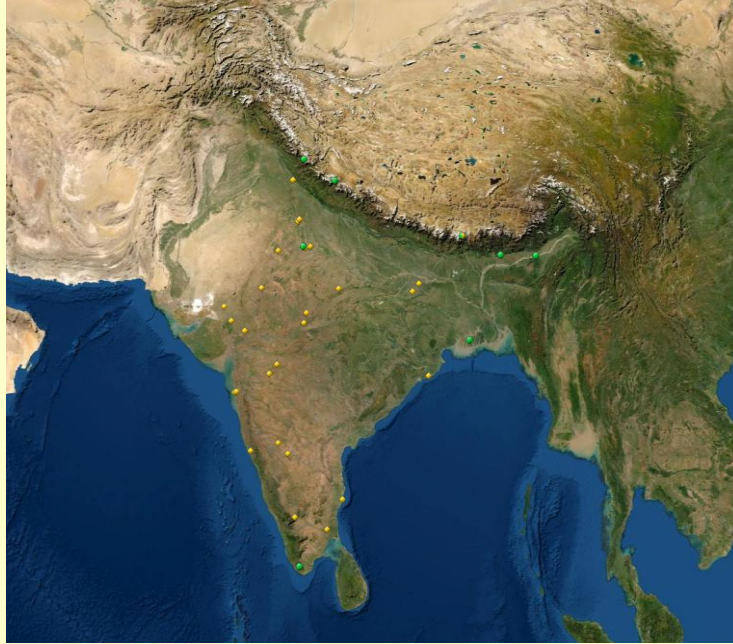


FIG 89 PROPERTIES IN INDIA INSCRIBED ON THE WORLD HERITAGE LIST
SOURCE: INDIA - UNESCO WORLD HERITAGE CENTRE

State	Property	Year of inscription
Cultural Property (30)		
Bihar	Archaeological Site of Nalanda Mahavihara at Nalanda	2016
	Mahabodhi Temple Complex at Bodh Gaya	2002
Gujarat	Champaner-Pavagadh Archaeological Park	2004
	Historic City of Ahmadabad	2017
	Rani-ki-Vav (the Queen's Stepwell) at Patan, Gujarat	2014
Goa	Churches and Convents of Goa	1986
Karnataka	Group of Monuments at Hampi	1986
	Group of Monuments at Pattadakal	1987
Madhya Pradesh	Buddhist Monuments at Sanchi	1989
	Khajuraho Group of Monuments	1986
	Rock Shelters of Bhimbetka	2003
Maharashtra	Ajanta Caves	1983
	Chhatrapati Shivaji Terminus	2004
	Elephanta Caves	1987
	Ellora Caves	1983
	Victorian Gothic and Art Deco Ensembles of Mumbai	2018

New Delhi	Humayun's Tomb	1993
	Qutb Minar and its Monuments, Delhi	1993
	Red Fort Complex	2007
Orissa	Sun Temple, Konârak	1984
Rajasthan	Hill Forts of Rajasthan	2013
	Jaipur City, Rajasthan	2019
	The Jantar Mantar, Jaipur	2010
Tamil Nadu	Group of Monuments at Mahabalipuram	1984
Uttar Pradesh	Agra Fort	1983
	Taj Mahal	1983
	Fatehpur Sikri	1986
--	Great Living Chola Temples	1987,2004
	Mountain Railways of India	1999,2005, 2008
	The Architectural Work of Le Corbusier, an Outstanding Contribution to the Modern Movement	2016
Natural (7)		
Assam	Kaziranga National Park	1985
	Manas Wildlife Sanctuary	1985
Himachal Pradesh	Great Himalayan National Park Conservation Area	2014
Rajasthan	Keoladeo National Park	1985
Uttaranchal	Nanda Devi and Valley of Flowers National Parks	1988,2005
West Bengal	Sundarbans National Park	1987
--	Western Ghats	2012
Mixed (1)		
Sikkim	Khangchendzonga National Park	2016

**THE ATHENS CHARTER FOR THE RESTORATION OF
HISTORIC MONUMENTS - 1931**

THE ATHENS CHARTER FOR THE RESTORATION OF HISTORIC MONUMENTS - 1931

Adopted at the First International Congress of Architects and Technicians of Historic Monuments, Athens 1931

At the Congress in Athens the following seven main resolutions were made and called "Carta del Restauro":

1. International organizations for Restoration on operational and advisory levels are to be established.
2. Proposed Restoration projects are to be subjected to knowledgeable criticism to prevent mistakes which will cause loss of character and historical values to the structures.
3. Problems of preservation of historic sites are to be solved by legislation at national level for all countries.
4. Excavated sites which are not subject to immediate restoration should be reburied for protection.
5. Modern techniques and materials may be used in restoration work.
6. Historical sites are to be given strict custodial protection.
7. Attention should be given to the protection of areas surrounding historic sites.

General Conclusions of the Athens Conference

I. -- DOCTRINES. GENERAL PRINCIPLES.

The Conference heard the statement of the general principles and doctrines relating to the protection of monuments.

Whatever may be the variety of concrete cases, each of which are open to a different solution, the Conference noted that there predominates in the different countries represented a general tendency to abandon restorations in toto and to avoid the attendant dangers by initiating a system of regular and permanent maintenance calculated to ensure the preservation of the buildings.

When, as the result of decay or destruction, restoration appears to be indispensable, it recommends that the historic and artistic work of the past should be respected, without excluding the style of any given period.

The Conference recommends that the occupation of buildings, which ensures the continuity of their life, should be maintained but that they should be used for a purpose which respects their historic or artistic character.

II. -- ADMINISTRATIVE AND LEGISLATIVE MEASURES REGARDING HISTORICAL MONUMENTS

The Conference heard the statement of legislative measures devised to protect monuments of artistic, historic or scientific interest and belonging to the different countries.

It unanimously approved the general tendency which, in this connection, recognises a certain right of the community in regard to private ownership.

It noted that the differences existing between these legislative measures were due to the difficulty of reconciling public law with the rights of individuals.

Consequently, while approving the general tendency of these measures, the Conference is of opinion that they should be in keeping with local circumstances and with the trend of public opinion, so that the least possible opposition may be encountered, due allowance being made for the sacrifices which the owners of property may be called upon to make in the general interest.

It recommends that the public authorities in each country be empowered to take conservatory measures in cases of emergency.

It earnestly hopes that the International Museums Office will publish a repertory and a comparative table of the legislative measures in force in the different countries and that this information will be kept up to date.

III. -- AESTHETIC ENHANCEMENT OF ANCIENT MONUMENTS.

The Conference recommends that, in the construction of buildings, the character and external aspect of the cities in which they are to be erected should be respected, especially in the neighbourhood of ancient monuments, where the surroundings should be given special consideration. Even certain groupings and certain particularly picturesque perspective treatment should be preserved.

A study should also be made of the ornamental vegetation most suited to certain monuments or groups of monuments from the point of view of preserving their ancient character. It specially recommends the suppression of all forms of publicity, of the erection of unsightly telegraph poles and the exclusion of all noisy factories and even of tall shafts in the neighbourhood of artistic and historic monuments.

IV. -- RESTORATION OF MONUMENTS.

The experts heard various communications concerning the use of modern materials for the consolidation of ancient monuments. They approved the judicious use of all the resources at the disposal of modern technique and more especially of reinforced concrete.

They specified that this work of consolidation should whenever possible be concealed in order that the aspect and character of the restored monument may be preserved.

They recommended their adoption more particularly in cases where their use makes it possible to avoid the dangers of dismantling and reinstating the portions to be preserved.

V. -- THE DETERIORATION OF ANCIENT MONUMENTS.

The Conference noted that, in the conditions of present day life, monuments throughout the world were being threatened to an ever-increasing degree by atmospheric agents.

Apart from the customary precautions and the methods successfully applied in the preservation of monumental statuary in current practice, it was impossible, in view of the complexity of cases and with the knowledge at present available, to formulate any general rules.

The Conference recommends:

1. That, in each country, the architects and curators of monuments should collaborate with specialists in the physical, chemical, and natural sciences with a view to determining the methods to be adopted in specific cases;
2. That the International Museums Office should keep itself informed of the work being done in each country in this field and that mention should be made thereof in the publications of the Office.

With regard to the preservation of monumental sculpture, the Conference is of opinion that the removal of works of art from the surroundings for which they were designed is, in principle, to be discouraged. It recommends, by way of precaution, the preservation of original models whenever these still exist or if this proves impossible, the taking of casts.

VI. -- THE TECHNIQUE of CONSERVATION.

The Conference is gratified to note that the principles and technical considerations set forth in the different detailed communications are inspired by the same idea, namely:

In the case of ruins, scrupulous conservation is necessary, and steps should be taken to reinstate any original fragments that may be recovered (anastylosis), whenever this is possible; the new materials used for this purpose should in all cases be recognisable. When the preservation of ruins brought to light in the course of excavations is found to be impossible, the Conference

recommends that they be buried, accurate records being of course taken before filling-in operations are undertaken.

It should be unnecessary to mention that the technical work undertaken in connection with the excavation and preservation of ancient monuments calls for close collaboration between the archaeologist and the architect.

With regard to other monuments, the experts unanimously agreed that, before any consolidation or partial restoration is undertaken, a thorough analysis should be made of the defects and the nature of the decay of these monuments. They recognised that each case needed to be treated individually.

VII. -- THE CONSERVATION OF MONUMENTS AND INTERNATIONAL COLLABORATION.

a) Technical and moral co-operation.

The Conference, convinced that the question of the conservation of the artistic and archaeological property of mankind is one that interests the community of the States, which are wardens of civilisation,

Hopes that the States, acting in the spirit of the Covenant of the League of Nations, will collaborate with each other on an ever-increasing scale and in a more concrete manner with a view to furthering the preservation of artistic and historic monuments;

Considers it highly desirable that qualified institutions and associations should, without in any manner whatsoever prejudicing international public law, be given an opportunity of manifesting their interest in the protection of works of art in which civilisation has been expressed to the highest degree and which would seem to be threatened with destruction;

Expresses the wish that requests to attain this end, submitted to the Intellectual Co-operation Organisation of the League of Nations, be recommended to the earnest attention of the States.

It will be for the International Committee on Intellectual Co-operation, after an enquiry conducted by the International Museums Office and after having collected all relevant information, more particularly from the National Committee on Intellectual Co-operation concerned, to express an opinion on the expediency of the steps to be taken and on the procedure to be followed in each individual case.

The members of the Conference, after having visited in the course of their deliberations and during the study cruise which they were able to make on this occasion, a number of excavation sites and ancient Greek monuments, unanimously paid a tribute to the Greek Government, which, for many years past, has been itself responsible for extensive works and, at the same time, has accepted the collaboration of archaeologists and experts from every country.

The members of the Conference there saw an example of activity which can but contribute to the realisation of the aims of intellectual co-operation, the need for which manifested itself during their work.

b) The role of education in the respect of monuments.

The Conference, firmly convinced that the best guarantee in the matter of the preservation of monuments and works of art derives from the respect and attachment of the peoples themselves;

Considering that these feelings can very largely be promoted by appropriate action on the part of public authorities;

Recommends that educators should urge children and young people to abstain from disfiguring monuments of every description and that they should teach them to take a greater and more general interest in the protection of these concrete testimonies of all ages of civilisation.

c) Value of international documentation.

The Conference expresses the wish that:

1. Each country, or the institutions created or recognised competent for this purpose, publish an inventory of ancient monuments, with photographs and explanatory notes;
2. Each country constitute official records which shall contain all documents relating to its historic monuments;
3. Each country deposit copies of its publications on artistic and historic monuments with the International Museums Office;
4. The Office devote a portion of its publications to articles on the general processes and methods employed in the preservation of historic monuments;
5. The Office study the best means of utilising the information so centralised.



**UNITED NATIONS EDUCATIONAL, SCIENTIFIC
AND CULTURAL ORGANISATION**

**CONVENTION CONCERNING THE PROTECTION OF THE
WORLD CULTURAL AND NATURAL HERITAGE**

Adopted by the General Conference at its seventeenth session Paris, 16 November 1972



Jit Kumar Gupta
Yamini Gupta

CONVENTION CONCERNING THE PROTECTION OF THE WORLD CULTURAL AND NATURAL HERITAGE

The General Conference of the United Nations Educational, Scientific and Cultural Organization meeting in Paris from 17 October to 21 November 1972, at its seventeenth session,

Noting that the cultural heritage and the natural heritage are increasingly threatened with destruction not only by the traditional causes of decay, but also by changing social and economic conditions which aggravate the situation with even more formidable phenomena of damage or destruction,

Considering that deterioration or disappearance of any item of the cultural or natural heritage constitutes a harmful impoverishment of the heritage of all the nations of the world,

Considering that protection of this heritage at the national level often remains incomplete because of the scale of the resources which it requires and of the insufficient economic, scientific, and technological resources of the country where the property to be protected is situated,

Recalling that the Constitution of the Organization provides that it will maintain, increase, and diffuse knowledge by assuring the conservation and protection of the world's heritage, and recommending to the nations concerned the necessary international conventions,

Considering that the existing international conventions, recommendations and resolutions concerning cultural and natural property demonstrate the importance, for all the peoples of the world, of safeguarding this unique and irreplaceable property, to whatever people it may belong,

Considering that parts of the cultural or natural heritage are of outstanding interest and therefore need to be preserved as part of the world heritage of mankind as a whole,

Considering that, in view of the magnitude and gravity of the new dangers threatening them, it is incumbent on the international community as a whole to participate in the protection of the cultural and natural heritage of outstanding universal value, by the granting of collective assistance which, although not taking the place of action by the State concerned, will serve as an efficient complement thereto,

Considering that it is essential for this purpose to adopt new provisions in the form of a convention establishing an effective system of collective protection of the cultural and natural heritage of outstanding universal value, organized on a permanent basis and in accordance with modern scientific methods,

Having decided, at its sixteenth session, that this question should be made the subject of an international convention,

Adopts this sixteenth day of November 1972 this Convention.

I. DEFINITION OF THE CULTURAL AND NATURAL HERITAGE

Article 1

For the purpose of this Convention, the following shall be considered as "cultural heritage":

monuments: architectural works, works of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings and combinations of features, which are of outstanding universal value from the point of view of history, art or science;

groups of buildings: groups of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of outstanding universal value from the point of view of history, art or science;

sites: works of man or the combined works of nature and man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view.

Article 2

For the purposes of this Convention, the following shall be considered as "natural heritage":

natural features consisting of physical and biological formations or groups of such formations, which are of outstanding universal value from the aesthetic or scientific point of view;

geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science or conservation;

natural sites or precisely delineated natural areas of outstanding universal value from the point of view of science, conservation or natural beauty.

Article 3

It is for each State Party to this Convention to identify and delineate the different properties situated on its territory mentioned in Articles 1 and 2 above.

II. NATIONAL PROTECTION AND INTERNATIONAL PROTECTION OF THE CULTURAL AND NATURAL HERITAGE

Article 4

Each State Party to this Convention recognizes that the duty of ensuring the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage referred to in Articles 1 and 2 and situated on its territory, belongs primarily to that State. It will do all it can to this end, to the utmost of its own resources and, where appropriate, with any international assistance and co-operation, in particular, financial, artistic, scientific and technical, which it may be able to obtain.

Article 5

To ensure that effective and active measures are taken for the protection, conservation and presentation of the cultural and natural heritage situated on its territory, each State Party to this Convention shall endeavor, in so far as possible, and as appropriate for each country:

- (a) to adopt a general policy which aims to give the cultural and natural heritage a function in the life of the community and to integrate the protection of that heritage into comprehensive planning programmes;
- (b) to set up within its territories, where such services do not exist, one or more services for the protection, conservation and presentation of the cultural and natural heritage with an appropriate staff and possessing the means to discharge their functions;
- (c) to develop scientific and technical studies and research and to work out such operating methods as will make the State capable of counteracting the dangers that threaten its cultural or natural heritage;
- (d) to take the appropriate legal, scientific, technical, administrative and financial measures necessary for the identification, protection, conservation, presentation and rehabilitation of this heritage; and

- (e) to foster the establishment or development of national or regional centres for training in the protection, conservation and presentation of the cultural and natural heritage and to encourage scientific research in this field.

Article 6

1. Whilst fully respecting the sovereignty of the States on whose territory the cultural and natural heritage mentioned in Articles 1 and 2 is situated, and without prejudice to property right provided by national legislation, the States Parties to this Convention recognize that such heritage constitutes a world heritage for whose protection it is the duty of the international community as a whole to co-operate.
2. The States Parties undertake, in accordance with the provisions of this Convention, to give their help in the identification, protection, conservation and presentation of the cultural and natural heritage referred to in paragraphs 2 and 4 of Article 11 if the States on whose territory it is situated so request.
3. Each State Party to this Convention undertakes not to take any deliberate measures which might damage directly or indirectly the cultural and natural heritage referred to in Articles 1 and 2 situated on the territory of other States Parties to this Convention.

Article 7

For the purpose of this Convention, international protection of the world cultural and natural heritage shall be understood to mean the establishment of a system of international co-operation and assistance designed to support States Parties to the Convention in their efforts to conserve and identify that heritage.

III INTERGOVERNMENTAL COMMITTEE FOR THE PROTECTION OF THE WORLD CULTURAL AND NATURAL HERITAGE

Article 8

1. An Intergovernmental Committee for the Protection of the Cultural and Natural Heritage of Outstanding Universal Value, called "the World Heritage Committee", is hereby established within the United Nations Educational, Scientific and Cultural Organization. It shall be composed of 15 States Parties to the Convention, elected by States Parties to the Convention meeting in general assembly during the ordinary session of the General Conference of the United Nations Educational, Scientific and Cultural Organization. The number of States members of the Committee shall be increased to 21 as from the date of the ordinary session of the General Conference following the entry into force of this Convention for at least 40 States.

2. Election of members of the Committee shall ensure an equitable representation of the different regions and cultures of the world.
3. A representative of the International Centre for the Study of the Preservation and Restoration of Cultural Property (Rome Centre), a representative of the International Council of Monuments and Sites (ICOMOS) and a representative of the International Union for Conservation of Nature and Natural Resources (IUCN), to whom may be added, at the request of States Parties to the Convention meeting in general assembly during the ordinary sessions of the General Conference of the United Nations Educational, Scientific and Cultural Organization, representatives of other intergovernmental or non-governmental organizations, with similar objectives, may attend the meetings of the Committee in an advisory capacity.

Article 9

1. The term of office of States members of the World Heritage Committee shall extend from the end of the ordinary session of the General Conference during which they are elected until the end of its third subsequent ordinary session.
2. The term of office of one-third of the members designated at the time of the first election shall, however, cease at the end of the first ordinary session of the General Conference following that at which they were elected; and the term of office of a further third of the members designated at the same time shall cease at the end of the second ordinary session of the General Conference following that at which they were elected. The names of these members shall be chosen by lot by the President of the General Conference of the United Nations Educational, Scientific and Cultural Organization after the first election.
3. States members of the Committee shall choose as their representatives persons qualified in the field of the cultural or natural heritage.

Article 10

1. The World Heritage Committee shall adopt its Rules of Procedure.
2. The Committee may at any time invite public or private organizations or individuals to participate in its meetings for consultation on particular problems.
3. The Committee may create such consultative bodies as it deems necessary for the performance of its functions.

Article 11

1. Every State Party to this Convention shall, in so far as possible, submit to the World Heritage Committee an inventory of property forming part of the cultural and natural heritage, situated in its territory and suitable for inclusion in the list provided for in paragraph 2 of this Article. This inventory, which shall not be considered exhaustive, shall include documentation about the location of the property in question and its significance.
2. On the basis of the inventories submitted by States in accordance with paragraph 1, the Committee shall establish, keep up to date and publish, under the title of "World Heritage List," a list of properties forming part of the cultural heritage and natural heritage, as defined in Articles 1 and 2 of this Convention, which it considers as having outstanding universal value in terms of such criteria as it shall have established. An updated list shall be distributed at least every two years.
3. The inclusion of a property in the World Heritage List requires the consent of the State concerned. The inclusion of a property situated in a territory, sovereignty or jurisdiction over which is claimed by more than one State shall in no way prejudice the rights of the parties to the dispute.
4. The Committee shall establish, keep up to date and publish, whenever circumstances shall so require, under the title of "list of World Heritage in Danger", a list of the property appearing in the World Heritage List for the conservation of which major operations are necessary and for which assistance has been requested under this Convention. This list shall contain an estimate of the cost of such operations. The list may include only such property forming part of the cultural and natural heritage as is threatened by serious and specific dangers, such as the threat of disappearance caused by accelerated deterioration, large-scale public or private projects or rapid urban or tourist development projects; destruction caused by changes in the use or ownership of the land; major alterations due to unknown causes; abandonment for any reason whatsoever; the outbreak or the threat of an armed conflict; calamities and cataclysms; serious fires, earthquakes, landslides; volcanic eruptions; changes in water level, floods and tidal waves. The Committee may at any time, in case of urgent need, make a new entry in the List of World Heritage in Danger and publicize such entry immediately.
5. The Committee shall define the criteria on the basis of which a property belonging to the cultural or natural heritage may be included in either of the lists mentioned in paragraphs 2 and 4 of this article.
6. Before refusing a request for inclusion in one of the two lists mentioned in paragraphs 2 and 4 of this article, the Committee shall consult the State Party in whose territory the cultural or natural property in question is situated.

7. The Committee shall, with the agreement of the States concerned, co-ordinate and encourage the studies and research needed for the drawing up of the lists referred to in paragraphs 2 and 4 of this article.

Article 12

The fact that a property belonging to the cultural or natural heritage has not been included in either of the two lists mentioned in paragraphs 2 and 4 of Article 11 shall in no way be construed to mean that it does not have an outstanding universal value for purposes other than those resulting from inclusion in these lists.

Article 13

1. The World Heritage Committee shall receive and study requests for international assistance formulated by States Parties to this Convention with respect to property forming part of the cultural or natural heritage, situated in their territories, and included or potentially suitable for inclusion in the lists mentioned referred to in paragraphs 2 and 4 of Article 11. The purpose of such requests may be to secure the protection, conservation, presentation or rehabilitation of such property.
2. Requests for international assistance under paragraph 1 of this article may also be concerned with identification of cultural or natural property defined in Articles 1 and 2, when preliminary investigations have shown that further inquiries would be justified.
3. The Committee shall decide on the action to be taken with regard to these requests, determine where appropriate, the nature and extent of its assistance, and authorize the conclusion, on its behalf, of the necessary arrangements with the government concerned.
4. The Committee shall determine an order of priorities for its operations. It shall in so doing bear in mind the respective importance for the world cultural and natural heritage of the property requiring protection, the need to give international assistance to the property most representative of a natural environment or of the genius and the history of the peoples of the world, the urgency of the work to be done, the resources available to the States on whose territory the threatened property is situated and in particular the extent to which they are able to safeguard such property by their own means.
5. The Committee shall draw up, keep up to date and publicize a list of property for which international assistance has been granted.

6. The Committee shall decide on the use of the resources of the Fund established under Article 15 of this Convention. It shall seek ways of increasing these resources and shall take all useful steps to this end.
7. The Committee shall co-operate with international and national governmental and non-governmental organizations having objectives similar to those of this Convention. For the implementation of its programmes and projects, the Committee may call on such organizations, particularly the International Centre for the Study of the Preservation and Restoration of Cultural Property (the Rome Centre), the International Council of Monuments and Sites (ICOMOS) and the International Union for Conservation of Nature and Natural Resources (IUCN), as well as on public and private bodies and individuals.
8. Decisions of the Committee shall be taken by a majority of two-thirds of its members present and voting. A majority of the members of the Committee shall constitute a quorum.

Article 14

1. The World Heritage Committee shall be assisted by a Secretariat appointed by the Director-General of the United Nations Educational, Scientific and Cultural Organization.
2. The Director-General of the United Nations Educational, Scientific and Cultural Organization, utilizing to the fullest extent possible the services of the International Centre for the Study of the Preservation and the Restoration of Cultural Property (the Rome Centre), the International Council of Monuments and Sites (ICOMOS) and the International Union for Conservation of Nature and Natural Resources (IUCN) in their respective areas of competence and capability, shall prepare the Committee's documentation and the agenda of its meetings and shall have the responsibility for the implementation of its decisions.

IV FUND FOR THE PROTECTION OF THE WORLD CULTURAL AND NATURAL HERITAGE

Article 15

1. A Fund for the Protection of the World Cultural and Natural Heritage of Outstanding Universal Value, called "the World Heritage Fund", is hereby established.

2. The Fund shall constitute a trust fund, in conformity with the provisions of the Financial Regulations of the United Nations Educational, Scientific and Cultural Organization.
3. The resources of the Fund shall consist of:
 - (a) compulsory and voluntary contributions made by States Parties to this Convention,
 - (b) Contributions, gifts or bequests which may be made by:
 - (i) other States;
 - (ii) the United Nations Educational, Scientific and Cultural Organization, other organizations of the United Nations system, particularly the United Nations Development Programme or other intergovernmental organizations;
 - (iii) public or private bodies or individuals;
 - (c) any interest due on the resources of the Fund;
 - (d) funds raised by collections and receipts from events organized for the benefit of the fund; and
 - (e) all other resources authorized by the Fund's regulations, as drawn up by the World Heritage Committee.
4. Contributions to the Fund and other forms of assistance made available to the Committee may be used only for such purposes as the Committee shall define. The Committee may accept contributions to be used only for a certain programme or project, provided that the Committee shall have decided on the implementation of such programme or project. No political conditions may be attached to contributions made to the Fund.

Article 16

1. Without prejudice to any supplementary voluntary contribution, the States Parties to this Convention undertake to pay regularly, every two years, to the World Heritage Fund, contributions, the amount of which, in the form of a uniform percentage applicable to all States, shall be determined by the General Assembly of States Parties to the Convention, meeting during the sessions of the General Conference of the United Nations Educational, Scientific and Cultural Organization. This decision of the General Assembly requires the majority of the States Parties present and voting, which have not made the declaration referred to in paragraph 2 of this Article. In no case shall the compulsory contribution of States Parties to the Convention exceed 1% of the contribution to the regular budget of the United Nations Educational, Scientific and Cultural Organization.
2. However, each State referred to in Article 31 or in Article 32 of this Convention may declare, at the time of the deposit of its instrument of ratification, acceptance or accession, that it shall not be bound by the provisions of paragraph 1 of this Article.
3. A State Party to the Convention which has made the declaration referred to in paragraph 2 of this Article may at any time withdraw the said declaration by notifying the Director-General of the United Nations Educational, Scientific and Cultural Organization. However, the withdrawal of the declaration shall not take effect in regard to the compulsory contribution due by the State until the date of the subsequent General Assembly of States parties to the Convention.
4. In order that the Committee may be able to plan its operations effectively, the contributions of States Parties to this Convention which have made the declaration referred to in paragraph 2 of this Article, shall be paid on a regular basis, at least every two years, and should not be less than the contributions which they should have paid if they had been bound by the provisions of paragraph 1 of this Article.
5. Any State Party to the Convention which is in arrears with the payment of its compulsory or voluntary contribution for the current year and the calendar year immediately preceding it shall not be eligible as a Member of the World Heritage Committee, although this provision shall not apply to the first election.

The terms of office of any such State which is already a member of the Committee shall terminate at the time of the elections provided for in Article 8, paragraph 1 of this Convention.

Article 17

The States Parties to this Convention shall consider or encourage the establishment of national public and private foundations or associations whose purpose is to invite donations for the protection of the cultural and natural heritage as defined in Articles 1 and 2 of this Convention.

Article 18

The States Parties to this Convention shall give their assistance to international fund-raising campaigns organized for the World Heritage Fund under the auspices of the United Nations Educational, Scientific and Cultural Organization. They shall facilitate collections made by the bodies mentioned in paragraph 3 of Article 15 for this purpose.

V. CONDITIONS AND ARRANGEMENTS FOR INTERNATIONAL ASSISTANCE

Article 19

Any State Party to this Convention may request international assistance for property forming part of the cultural or natural heritage of outstanding universal value situated within its territory. It shall submit with its request such information and documentation provided for in Article 21 as it has in its possession and as will enable the Committee to come to a decision.

Article 20

Subject to the provisions of paragraph 2 of Article 13, sub-paragraph (c) of Article 22 and Article 23, international assistance provided for by this Convention may be granted only to property forming part of the cultural and natural heritage which the World Heritage Committee has decided, or may decide, to enter in one of the lists mentioned in paragraphs 2 and 4 of Article 11.

Article 21

1. The World Heritage Committee shall define the procedure by which requests to it for international assistance shall be considered and shall specify the content of the request, which should define the operation contemplated, the work that is necessary, the expected cost thereof, the degree of urgency and the reasons why the resources of the State requesting assistance do not allow it to meet all the expenses. Such requests must be supported by experts' reports whenever possible.

2. Requests based upon disasters or natural calamities should, by reasons of the urgent work which they may involve, be given immediate, priority consideration by the Committee, which should have a reserve fund at its disposal against such contingencies.
3. Before coming to a decision, the Committee shall carry out such studies and consultations as it deems necessary.

Article 22

Assistance granted by the World Heritage Fund may take the following forms:

- (a) studies concerning the artistic, scientific and technical problems raised by the protection, conservation, presentation and rehabilitation of the cultural and natural heritage, as defined in paragraphs 2 and 4 of Article 11 of this Convention;
- (b) provisions of experts, technicians and skilled labour to ensure that the approved work is correctly carried out;
- (c) training of staff and specialists at all levels in the field of identification, protection, conservation, presentation and rehabilitation of the cultural and natural heritage;
- (d) supply of equipment which the State concerned does not possess or is not in a position to acquire;
- (e) low-interest or interest-free loans which might be repayable on a long-term basis;
- (f) the granting, in exceptional cases and for special reasons, of non-repayable subsidies.

Article 23

The World Heritage Committee may also provide international assistance to national or regional centres for the training of staff and specialists at all levels in the field of identification, protection, conservation, presentation and rehabilitation of the cultural and natural heritage.

Article 24

International assistance on a large scale shall be preceded by detailed scientific, economic and technical studies. These studies shall draw upon the most advanced techniques for the protection, conservation, presentation and rehabilitation of the natural and cultural heritage and shall be consistent with the objectives of this Convention. The studies shall also seek means of making rational use of the resources available in the State concerned.

Article 25

As a general rule, only part of the cost of work necessary shall be borne by the international community. The contribution of the State benefiting from international assistance shall constitute a substantial share of the resources devoted to each programme or project, unless its resources do not permit this.

Article 26

The World Heritage Committee and the recipient State shall define in the agreement they conclude the conditions in which a programme or project for which international assistance under the terms of this Convention is provided, shall be carried out. It shall be the responsibility of the State receiving such international assistance to continue to protect, conserve and present the property so safeguarded, in observance of the conditions laid down by the agreement.

VI. EDUCATIONAL PROGRAMMES

Article 27

1. The States Parties to this Convention shall endeavor by all appropriate means, and in particular by educational and information programmes, to strengthen appreciation and respect by their peoples of the cultural and natural heritage defined in Articles 1 and 2 of the Convention.
2. They shall undertake to keep the public broadly informed of the dangers threatening this heritage and of the activities carried on in pursuance of this Convention.

Article 28

States Parties to this Convention which receive international assistance under the Convention shall take appropriate measures to make known the importance of the property for which assistance has been received and the role played by such assistance.

VII. REPORTS

Article 29

1. The States Parties to this Convention shall, in the reports which they submit to the General Conference of the United Nations Educational, Scientific and Cultural Organization on dates and in a manner to be determined by it, give information on the legislative and administrative provisions which they have adopted and other action which they have taken for the application of this Convention, together with details of the experience acquired in this field.
2. These reports shall be brought to the attention of the World Heritage Committee.
3. The Committee shall submit a report on its activities at each of the ordinary sessions of the General Conference of the United Nations Educational, Scientific and Cultural Organization.

VIII FINAL CLAUSES

Article 30

This Convention is drawn up in Arabic, English, French, Russian and Spanish, the five texts being equally authoritative.

Article 31

1. This Convention shall be subject to ratification or acceptance by States members of the United Nations Educational, Scientific and Cultural Organization in accordance with their respective constitutional procedures.
2. The instruments of ratification or acceptance shall be deposited with the Director-General of the United Nations Educational, Scientific and Cultural Organization.

Article 32

1. This Convention shall be open to accession by all States not members of the United Nations Educational, Scientific and Cultural Organization which are invited by the General Conference of the Organization to accede to it.

2. Accession shall be effected by the deposit of an instrument of accession with the Director-General of the United Nations Educational, Scientific and Cultural Organization.

Article 33

This Convention shall enter into force three months after the date of the deposit of the twentieth instrument of ratification, acceptance or accession, but only with respect to those States which have deposited their respective instruments of ratification, acceptance or accession on or before that date. It shall enter into force with respect to any other State three months after the deposit of its instrument of ratification, acceptance or accession.

Article 34

The following provisions shall apply to those States Parties to this Convention which have a federal or non-unitary constitutional system:

- (a) with regard to the provisions of this Convention, the implementation of which comes under the legal jurisdiction of the federal or central legislative power, the obligations of the federal or central government shall be the same as for those States parties which are not federal States;
- (b) with regard to the provisions of this Convention, the implementation of which comes under the legal jurisdiction of individual constituent States, countries, provinces or cantons that are not obliged by the constitutional system of the federation to take legislative measures, the federal government shall inform the competent authorities of such States, countries, provinces or cantons of the said provisions, with its recommendation for their adoption.

Article 35

1. Each State Party to this Convention may denounce the Convention.
2. The denunciation shall be notified by an instrument in writing, deposited with the Director-General of the United Nations Educational, Scientific and Cultural Organization.
3. The denunciation shall take effect twelve months after the receipt of the instrument of denunciation. It shall not affect the financial obligations of the denouncing State until the date on which the withdrawal takes effect.

Article 36

The Director-General of the United Nations Educational, Scientific and Cultural Organization shall inform the States members of the Organization, the States not members of the Organization which are referred to in Article 32, as well as the United Nations, of the deposit of all the instruments of ratification, acceptance, or accession provided for in Articles 31 and 32, and of the denunciations provided for in Article 35.

Article 37

1. This Convention may be revised by the General Conference of the United Nations Educational, Scientific and Cultural Organization. Any such revision shall, however, bind only the States which shall become Parties to the revising convention.
2. If the General Conference should adopt a new convention revising this Convention in whole or in part, then, unless the new convention otherwise provides, this Convention shall cease to be open to ratification, acceptance or accession, as from the date on which the new revising convention enters into force.

Article 38

In conformity with Article 102 of the Charter of the United Nations, this Convention shall be registered with the Secretariat of the United Nations at the request of the Director-General of the United Nations Educational, Scientific and Cultural Organization.

Done in Paris, this twenty-third day of November 1972, in two authentic copies bearing the signature of the President of the seventeenth session of the General Conference and of the Director-General of the United Nations Educational, Scientific and Cultural Organization, which shall be deposited in the archives of the United Nations Educational, Scientific and Cultural Organization, and certified true copies of which shall be delivered to all the States referred to in Articles 31 and 32 as well as to the United Nations.

Whilst the objective of the legislation and policies protecting our heritage is directed primarily to sustaining its heritage value, doing so can achieve or substantially contribute towards other important spatial planning goals – Historic England

HERITAGE REGULATIONS



Jit Kumar Gupta
Yamini Gupta

MODEL HERITAGE REGULATIONS



TOWN AND COUNTRY PLANNING ORGANISATION

MINISTRY of URBAN DEVELOPMENT
GOVERNMENT of INDIA

2011



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Dedicated to Shyam Chainani
*Founder, **Bombay Environment Action Group (BEAG)***

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1. OBJECT

The object of Heritage Regulations is to safeguard, conserve, restore, manage, and maintain the heritage of India's cities, towns and villages, while regulating interventions and development activities having an impact on the heritage.

2. SCOPE

Conservation of heritage shall include buildings, artefacts, structures, streets, areas and precincts of historic, or aesthetic, or architectural, or cultural or environmentally significant nature (heritage buildings and heritage precincts), natural feature areas of environmental significance and sites of scenic beauty.

3. APPLICABILITY

The Regulations shall apply to all urban and rural areas of the State. They shall apply to heritage sites which shall be listed, graded and notified by the State Government under these Regulations, which are not under the purview of Archaeological Survey of India or State Archeological Departments (hereinafter referred to as Heritage Zones, Listed Heritage Sites, Listed Heritage Precincts, and Listed Heritage Structures). These shall include those buildings, artefacts, structures, streets, areas and precincts of historic, or architectural, or aesthetic, or cultural or environmentally significant nature (hereinafter referred to as Listed Heritage Buildings / Listed Heritage Precincts) and those natural feature areas of environmental significance or of scenic beauty including, but not restricted to, sacred groves, hills, hillocks, water bodies (and the areas adjoining the same), open areas, wooded areas, points, walks, rides, bridle paths (hereinafter referred to as 'listed natural feature areas') which shall also be listed in the notification to be issued by the State Government / identified in Master Plan. The process of listing heritage and grading the same is mandatory in all urban and rural areas in the State within the time frame specified under these Regulations and shall become part of Master Plan / Development Plan / Zonal Plan/ Draft District Development Plan, Metropolitan Plan and Regional Plan, if available for the referred area.

The list(s) issued in the Notification shall be hereinafter referred to as the "said list".

4. DEFINITIONS

- a) **“Heritage building”** means and includes any building comprising of one or more premises or any part thereof or structure or artefact which requires conservation or preservation for historical or architectural or artistic or artisanry or aesthetic or cultural or environmental or ecological purposes 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 or architectural or aesthetic or cultural or environmental value of such a building.
- b) **“Heritage Precinct”** means and includes spaces that require conservation or preservation for historical or architectural or aesthetic or cultural or environmental or ecological purpose and walls or other boundaries of a particular area or place or building which may enclose such space by an imaginary line drawn around it. The precinct may also include Heritage Streets, a Mohalla or ‘pol’ or any other area of one set character.
- c) **“Urban Heritage”** refers to the built legacy of the town/city history and includes protected and unprotected monuments, individual and group of buildings of archaeological, architectural, historic and cultural significance, public spaces including landscape, parks and gardens, street layout defining identifiable neighbourhoods or precincts, which together identify the visual, spatial and cultural character of the city. This is tangible and is closely linked with the intangible heritage, which confers it with meaning and significance.
- d) **“Cultural Heritage”** designates a monument, group of buildings or site/(s) of historical, aesthetic, archaeological, scientific, ethnological or anthropological value.
- e) **“Natural Heritage”** designates outstanding physical, biological and geological features; habitat of threatened plants or animal species and areas of value on scientific or aesthetic grounds or from a conservation perspective.

- f) **“Heritage Area”** is a buffer around a protected or unprotected structure, precinct or site and may include protected views.
- g) **“Heritage Zone”** is the zone delineated in the Master Plan / Zonal Plan that requires special attention in terms of heritage conservation.
- h) **“Heritage Site”** is a site which may be natural or built or open having significant heritage value.
- i) **“Conservation”** means all the processes of preserving and maintaining a place so as to retain its historical or architectural or aesthetic or cultural significance and includes maintenance, preservation, restoration, reconstruction and adoption of a combination of one or more of these measures.
- j) **“Preservation”** means and includes maintaining the form and fabric of a place in its existing state and checking deterioration.
- k) **“Restoration”** means and includes returning the existing fabric of a place to a known earlier state by removing accretions or by reassembling existing components without introducing new materials.
- l) **“Reconstruction”** means and includes returning a place as nearly as possible to a known earlier state and distinguished by the introduction of materials (new or old) into the fabric. This shall not include either re- creation or conjectural reconstruction.
- m) **“Skyline”** means the profile of buildings as seen from a distance.
- n) **“Listing”** means preparing an inventory of Heritage Zones, Listed Heritage Sites, Listed Heritage Precincts, and Listed Heritage structures as per various parameters.
- o) **“Grading”** means categorization of all listed heritage as per historical significance.

p) **“Historic Urban Landscape”** means ensembles of any group of buildings, structures and open spaces, in their natural and ecological context, including archaeological and paleontological sites, constituting human settlements in an urban environment over a relevant period of time, the cohesion and value of which are recognized from the archaeological, architectural, prehistoric, historic, scientific, aesthetic, socio-cultural or ecological point of view.

5. PREPARATION OF LIST OF HERITAGE SITES INCLUDING HERITAGE BUILDINGS, HERITAGE PRECINCTS AND LISTED NATURAL FEATURE AREAS

The list of heritage sites including Heritage Buildings, Heritage Precincts and listed Natural Features Areas shall be prepared by the Commissioner/CEO, Municipal Corporation / Municipal Council / Nagar Panchayat or Vice- Chairman, Development Authority or District Collector as the case may be on the advice of the Heritage Conservation Committee to be appointed by the State Government. Before being finalized, objections and suggestions from the public are to be invited and considered. The said list to which the Regulations apply shall not form part of these Regulations for the purpose of Building Bye-laws or Development Control Regulations. The list may be supplemented from time to time by the Government on receipt of proposals from agencies concerned or by the Government *suo moto*, provided that before the list is supplemented, objections and suggestions from the public are to be invited and duly considered by the Commissioner/CEO, Municipal Corporation / Municipal Council/Nagar Panchayat or Vice-Chairman, Development Authority or District Collector, as the case may be on the advice of the Heritage Conservation Committee.

When a building or group of buildings or natural feature areas are listed, it would automatically mean (unless otherwise indicated) that the entire property including its entire compound / plot boundary along with all the subsidiary structures and artefacts, etc. within the compound/plot boundary, etc. shall form part of the list.

6. CRITERIA FOR LISTING

The listing of heritage may be done as per the parameters given below

		Abbreviations
(a)	Value for architectural, historical or cultural reasons	A
-	Architectura ...	A(arc)
-	historical	A(his)
-	cultural	A(cul)
(b)	The date and/or period and/or design and/or unique use of the building or artefact	B
-	period	B(per)
-	design	B(des)
-	use	B(use)
(c)	Relevance to social or economic history	C(seh)
(d)	Association with well-known persons or events	D(bio)
(e)	A building or group of buildings and/or areas of a distinct architectural design and/or style, historic period or way of life having sociological interest and/or community value	E
-	style	
-	historical	
(f)	The unique value of a building or architectural features or artefact and/or being part of a chain of architectural development that would be broken if it were lost	F
(g)	Its value as a part of a group of buildings	G (grp)
(h)	Representing forms of technological development... ..	H (tec)
(i)	Vistas of natural/scenic beauty or interest, including water-front areas, distinctive and/or planned lines of sight, street line, skyline or topographical	I (sec)

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- (j) Open spaces sometimes integrally planned with their associated areas having a distinctive way of life which have the potential to be areas of recreation **J**
- (k) Natural heritage sites **NH**
- (l) Sites of scenic beauty (sec)
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7. GRADING OF THE LISTED BUILDINGS /PRECINCTS

Listed Heritage Buildings / Precincts may be graded into three categories. The definition of these and basic guidelines for development permissions are as given in section 7.1

Listing does not prevent change of ownership or use. However, change of use of such Listed Heritage Buildings / Precincts shall not be permitted without the prior approval of the Heritage Conservation Committee. Use should be in harmony with the said listed heritage site.

7.1 IMPLICATIONS OF LISTING AS HERITAGE BUILDINGS

The Regulations do not amount to any blanket prevention of changes to Heritage Buildings. The only requirement is to obtain clearance from the Commissioner,/CEO, Municipal Corporation, Municipal Council/Nagar Panchayat or Vice- Chairman, Development Authority or District Collector, as the case may be on the advice of the Heritage Conservation Committee.

The categories of grading and the relevant procedures are indicated under each category in the following table.

GRADE-I	GRADE-II	GRADE-III	HERITAGE PRECINCTS
<p>(A) Definition</p> <p>Heritage Grade-I comprises buildings and precincts of national or historic importance, embodying excellence in architectural style, design, technology and material usage and/or aesthetics; they may be associated with a historic event, personality, movement or institution. They have been and are the prime landmarks of the region. All natural sites shall fall within Grade-I.</p>	<p>Heritage Grade-II comprises of buildings and precincts of regional or local importance possessing special architectural or aesthetic merit, or cultural or historical significance though of a lower scale than Heritage Grade-I. They are local landmarks, which contribute to the image and identity of the region. They may be the work of master craftsmen or may be models of proportion and ornamentation or designed to suit a particular climate.</p>	<p>Heritage Grade-III comprises buildings and precincts of importance for townscape; that evoke architectural aesthetic, or sociological interest though not as much as in Heritage Grade-II. These contribute to determine the character of the locality and can be representative of lifestyle of a particular community or region and may also be distinguished by setting, or special character of the façade and uniformity of height, width and scale.</p>	<p>A heritage precinct is an area of heritage value. It may consist of a number of buildings and spaces, such as streets, with cultural or heritage significance worth recognition and conservation, or it may be an area where the relationship between various elements creates a special sense of place like mass, scale, building material, typology, roof profile and shapes or containing architectural style or elements. Precincts are of different importance and are made up of different types of elements such as houses, trees, commercial properties and public spaces combining to create a unique significance.</p>
<p>(B) Objective:</p> <p>Heritage Grade-I richly deserves careful preservation.</p>	<p>Heritage Grade-II deserves intelligent conservation.</p>	<p>Heritage Grade-III deserves intelligent conservation (though on a lesser scale than Grade-II and special protection to unique features and attributes).</p>	<p>Precincts deserve appropriate repair and maintenance and very sensitive development i.e. regarding the mass, scale and setting. It also requires conservation of its heritage and cultural significance.</p>

<p>(C) Scope for Changes:</p> <p>No interventions shall be permitted either on exterior or interior of the heritage building or natural features unless it is necessary in the interest of strengthening and prolonging the life of the buildings/or precincts or any part or features thereof. For this purpose, absolutely essential and minimum changes shall be allowed and they must be in conformity with the original.</p>	<p>Grade-II(A):</p> <p>Internal changes and adaptive re-use may be allowed, subject to strict scrutiny. Care should be taken to ensure the conservation of all special aspects for which it is included in Heritage Grade-II.</p> <p>Grade-II(B):</p> <p>In addition to the above, extension or additional building on the same plot or compound may in certain circumstances, be allowed provided that the extension / additional building is in harmony with (and does not detract from) the existing heritage building/(s) or precincts especially in terms of height and façade and provided that the additional building is not larger than the original building in terms of mass and scale</p>	<p>Internal changes and adaptive re-use may by and large be allowed. Changes may include extensions and additional buildings on the same plot or compound. However, any changes should be such that they are in harmony and should be such that they do not detract from the existing heritage building/ precinct especially in terms of height and façade and provided that the extension/ additional building is not larger than the original building in mass and scale.</p>	<p>Sensitive additions, alterations, extensions and interior renovations shall be permissible but these should not alter the character of the building/ precinct. The new interventions may be contemporary but subtle or inspired by the original character and not tasteless imitation. Reconstruction is permissible but only for buildings that are totally structurally unsafe as certified by a Structural Engineer and corroborated by the Heritage Conservation Committee. The reconstruction should not follow the prevailing byelaws but should be in such a manner which ensures that the building/ precinct character is not diminished, yet allows for growth and good urban design. Urban Design Guidelines should be prepared separately for each of the listed heritage precincts as extension of the bye laws. All constructions within heritage precincts should be governed by the said guidelines.</p>
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<p>D) Procedure:</p> <p>Development permission for changes shall be given by the Commissioner/CEO, Municipal Corporation/ Municipal Council/ Nagar Panchayat/ Vice-Chairman, Development Authority / District Collector on the advice of the Heritage Conservation Committee. Reports stating that buildings are structurally unsafe should be checked by a Structural Engineer and duly cross checked by the Heritage Conservation Committee before allowing reconstruction.</p> <p>E) Vistas / Surrounding Development: All development in areas surrounding Heritage Grade-I shall be regulated and controlled, ensuring that it does not mar the grandeur of, or view of Heritage Grade-I.</p>	<p>Development permission for changes shall be given by the Commissioner/CEO, Municipal Corporation/ Municipal Council/ Nagar Panchayat/ Vice-Chairman, Development Authority / District Collector on the advice of the Heritage Conservation Committee. Reports stating that buildings are structurally unsafe should be checked by a Structural Engineer and duly cross checked by the Heritage Conservation Committee before allowing reconstruction. All development in areas surrounding Heritage Grade-II shall be regulated and controlled, ensuring that it does not mar the grandeur of, or view of Heritage Grade-II.</p>	<p>Development permission for changes would be given by the Commissioner/CEO, Municipal Corporation/ Municipal Council/ Nagar Panchayat/ Vice-Chairman, Development Authority / District Collector on the advice of the Heritage Conservation Committee. Reports stating that buildings are structurally unsafe should be checked by a Structural Engineer and duly cross checked by the Heritage Conservation Committee before allowing reconstruction. All development in areas surrounding Heritage Grade-III shall be regulated and controlled, ensuring that it does not mar the grandeur of, or view of Heritage Grade-III.</p>	<p>Development permission for changes shall be given by the Commissioner/CEO, Municipal Corporation/ Municipal Council/ Nagar Panchayat/ Vice-Chairman, Development Authority / District Collector on the advice of the Heritage Conservation Committee . Reports stating that buildings are structurally unsafe should be checked by a Structural Engineer and duly cross checked by the Heritage Conservation Committee before allowing reconstruction. All development within precincts should be regulated and controlled following the Urban Design Guidelines.</p>
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8 DEVELOPMENT CONTROL

8.1 RESPONSIBILITY OF THE OWNERS OF HERITAGE BUILDINGS

It shall be the responsibility of the owners of heritage buildings and buildings in heritage precincts to carry out regular repairs. The State Government / Municipal Corporations / Municipal Councils / Nagar Panchayats/ Rural Local Bodies and Authorities shall not be responsible for such repair and maintenance except for the buildings owned by them.

8.2 RESTRICTIONS ON DEVELOPMENT / RE-DEVELOPMENT / REPAIRS ETC.

(i) No development or redevelopment or engineering operation or additions / alterations, repairs, renovations including painting of the building, replacement of special features or plastering or demolition of any part thereof of the said listed buildings or listed precincts or listed natural feature areas shall be allowed except with the prior permission of the Commissioner/CEO, Municipal Corporation / Municipal Council / Nagar Panchayat or Vice-Chairman, Development Authority or District Collector. Before granting such permission, the agency concerned shall consult the “Heritage Conservation Committee” and shall act in accordance with the advice of the “Heritage Conservation Committee”.

(ii) Provided that, before granting any permission for demolition or major alterations / additions to listed buildings (or buildings within listed streets or precincts), or construction at any listed natural feature areas, or alteration of boundaries of any listed natural feature areas, objections and suggestions from the public shall be invited and considered by the “Heritage Conservation Committee”.

(iii) Provided that, only in exceptional cases, for reasons to be recorded in writing, the Commissioner/ CEO, Municipal Corporation / Municipal Council / Nagar Panchayat or Vice-Chairman, Development Authority or District Collector may refer the matter back to the Heritage Conservation Committee for reconsideration.

The decision of the Heritage Conservation Committee after such reconsideration shall be final and binding.

8.3 ALTERATIONs / MODIFICATIONs / RELAXATIONs IN DEVELOPMENT NORMS

On the advice of the Heritage Conservation Committee and for reasons to be recorded in writing, the Commissioner,/CEO, Municipal Corporation / Municipal Council / Nagar Panchayat or Vice-Chairman, Development Authority or District Collector shall follow the procedure as per Development Authority Act / Town and Country Planning Act / Building Byelaws / Development Control Regulations to alter, modify or relax the Development Control Norms prescribed, if required, for the conservation or preservation or retention of historic or aesthetic or cultural or architectural or environmental quality or beauty or vista of any heritage building/precinct.

8.4 DEVELOPMENT PERMISSION FOR HERITAGE PRECINCTS / NATURAL FEATURE AREAS

In case of notified streets, precincts, areas and natural feature areas, development permissions shall be granted in accordance with Urban Design Guidelines prescribed for respective streets, precincts / natural feature areas which shall be framed by the Commissioner/CEO, Municipal Corporation / Municipal Council / Nagar Panchayat or Vice- Chairman, Development Authority or District Collector on the advice of the Heritage Conservation Committee.

Before finalizing the same, the draft shall be published in the official gazette and in leading newspapers in English and the local language for the purpose of inviting objections and suggestions from the public. All objections and suggestions received from public within a period of 30 days from the date of publication in the official gazette shall be considered by the Commissioner/CEO, Municipal Corporation / Municipal Council / Nagar Panchayat/ Vice-Chairman, Development Authority / District Collector / Heritage Conservation Committee.

After consideration of the above suggestions and objections, the agency concerned, acting on the advice of the Heritage Conservation Committee shall modify, if necessary, the aforesaid Urban Design Guidelines for streets, precincts, and natural features areas and forward the same to Government for notification.

Provided that pending consideration of suggestions and objections and pending final sanction of the Government, the Commissioner/CEO, Municipal Corporation / Municipal Council / Nagar Panchayat or Vice-Chairman, Development Authority or District Collector/ Heritage Conservation Committee shall give due regard to the draft regulations while considering applications for development / re- development etc. of heritage buildings, streets, heritage precincts, areas, listed natural features.

8.5 PROTECTION OF VISUAL LANDSCAPE AND SURROUNDINGS

Buildings within heritage precincts or in the vicinity of heritage sites shall strive to maintain the skyline in the precinct and follow the architectural style (without any high-rise or multi-storeyed development) as may be existing in the surrounding area, so as not to diminish or destroy the aesthetic value or view of, from the said heritage sites. The development within the precinct or in the vicinity of heritage sites shall be in accordance with the Urban Design Guidelines framed by the Commissioner/CEO, Municipal Corporation / Municipal Council / Nagar Panchayat or Vice-Chairman, Development Authority or District Collector on the advice of the Heritage Conservation Committee or separate Regulations if any, prescribed for respective zones by the Municipal Corporation / Municipal Council / Panchayat / Development Authority / District Collector.

8.6 SIGNS AND OUTDOOR DISPLAY STRUCTURES / INCLUDING STREET FURNITURE ON HERITAGE SITES

The Commissioner/CEO, Municipal Corporation / Municipal Council / Nagar Panchayat or Vice-Chairman, Development Authority or District Collector on the advice of the Heritage Conservation Committee shall frame Regulations to regulate signs, outdoor display structures and street furniture on heritage sites. Till such regulations are framed, the following guidelines may be followed:

A) National Building Code to apply – The display or advertising signs and outdoor display structures on buildings and land shall be in accordance with Part X – Signs and Outdoor Display Structures of the National Building Code of India, 2005.

B) Additional Conditions – In addition to sub-regulation A, above, the following provisions shall apply to advertising signs in different land use zones:

i) Residential Zone : Non-flashing neon signs with illumination not exceeding 40 watts.

(a) One name plate with an area not exceeding 0.1 sq. m. for each dwelling unit

(b) For other uses permissible in the zone, one identification sign or bulletin board with an area not exceeding 10 sq.m. provided the height does not exceed 1.5 m.

(c) “For sale” or “For rent” signs for real estate, not exceeding 2 sq. m. in area provided they are located on the premises offered for sale or rent.

ii) Mixed Use Zone : Non flashing business signs placed parallel to the wall and not exceeding 1 m in height per establishment.

iii) Commercial Zone : Flashing or non-flashing business signs parallel to the wall not exceeding 1 m in height provided such signs do not face residential buildings in which case only non-flashing signs shall be permitted.

C) Prohibition of advertising signs and outdoor display structures in certain cases:

Notwithstanding the provisions of sub-regulations A & B, no advertising sign or outdoor display structures shall be permitted on buildings of architectural, aesthetic, historical or heritage importance as may be decided by the Commissioner/CEO, Municipal Corporation / Municipal Council / Nagar Panchayat or Vice-Chairman, Development Authority or District Collector on the advice of the Heritage Conservation Committee or on Government buildings, save that in the case of Government buildings only, advertising signs or outdoor display structures may be permitted if they relate to the activities of the said buildings.

D) Provided, that if the Heritage Conservation Committee so advises, the Commissioner/CEO, Municipal Corporation / Municipal Council / Nagar Panchayat or Vice-Chairman, Development Authority or District Collector, shall refuse permission for any sign or outdoor display structure.

E) The Municipal Commissioner/CEO, Municipal Corporation / Municipal Council / Nagar Panchayat or Vice-Chairman, Development Authority or District Collector, may, on the advice of the Heritage Conservation Committee, add to, alter or amend the provisions of sub-regulations A, B and C above.

F) Signs, outdoor display structures (including street furniture) shall require the approval of the Heritage Conservation Committee, which may prescribe additional requirements for the same.

8.7 RESTRICTIVE COVENANTS

Restrictions existing as imposed under covenants, terms and conditions on leasehold plots either by the State Government or by Municipal Corporation, Municipal Council/Nagar Panchayat or Development Authority /District Collector shall continue to be imposed in addition to Development Control Regulations. However, in case of any conflict with the heritage preservation, the Heritage Regulations shall prevail.

8.8 PENALTIES

Violation of the Regulations shall be punishable under the provisions regarding unauthorized development. In case of proven deliberate neglect of and/or damage to Heritage Buildings and Heritage Precincts, or if the building is allowed to be damaged or destroyed due to neglect or any other reason, in addition to penal action provided under the Act concerned, no permission to construct any new building shall be granted on the site if a Heritage Building or Building in a Heritage Precinct is damaged or pulled down without prior permission of the Municipal Commissioner/CEO, Municipal Corporation / Municipal Council / Nagar Panchayat or Vice-Chairman, Development Authority or District Collector.

It shall be open to the “Heritage Conservation Committee” to consider a request for re-building/reconstruction of a Heritage Building that was unauthorizedly demolished or damaged, provided that the total built-up area in all floors put together in such new construction shall not be in excess of the total built-up area in all floors put together in the original Heritage Building in the same form and style in addition to other conditions / controls that may be specified.

9 EXISTING PLANS AND PROJECTS

9.1 ROAD WIDENING

(i) If road widening lines are proposed under the Master Plan, they shall be such that they protect and not detract from the said heritage sites.

(ii) If there are any new road widening lines proposed in the revised draft or sanctioned Development Plans / Master Plans / Regional Plans, the Municipal Commissioner/CEO, Municipal Corporation / Municipal Council / Nagar Panchayat or Vice- Chairman, Development Authority or District Collector / Heritage Conservation Committee shall consider the heritage provisions and environmental aspects while considering applications for development permissions in these areas. Necessary steps may be taken to modify the Development Plan / Master Plan/Regional Plan accordingly. Pending this action, the road widening / development of new roads shall not be carried out.

(iii) No widening of the existing roads under the Development Plan/Master Plan / Regional Plans shall be carried out in a manner which may affect the existing heritage buildings (even if they are not included in a Heritage Precinct) or which may affect listed natural features. Widening of the existing roads under the Master Plan or Zonal Development Plan or Layout Plan shall be carried out considering the existing heritage buildings (even if they are not included in a Heritage Precinct) which may affect listed natural features areas.

9.2 MASTER PLAN RESERVATIONS

If there are any Development Plan / Master Plan / Regional Plan reservations shown on heritage sites, the same shall not be implemented. If required, Municipal Commissioner/CEO, Municipal Corporation / Municipal Council / Nagar Panchayat or Vice- Chairman, Development Authority or District Collector, on the advice of the Heritage Conservation Committee, shall approach the State Government to get these reservations modified/deleted.

10. INCENTIVE USES FOR HERITAGE BUILDINGS

In case of buildings located in non-commercial use zones included in the Heritage Conservation List, if the owner / owners agree to maintain the listed heritage building as it is, in the existing state and to preserve its heritage state with due repairs and the owner / owners / lessees give a written undertaking to that effect, the owner / owners / lessees may be allowed with the approval of the “Heritage Conservation Committee” within permissible use zones to convert part or whole thereof of the non-commercial area within such a heritage building to Commercial / office / hotel use. Provided that, if the heritage building is not maintained suitably or if the heritage value of the building is altered in any manner, the commercial / office / hotel use shall be disallowed.

10.1 GRANT OF TRANSFERABLE DEVELOPMENT RIGHTS (TDR) IN CASES OF LOSS OF DEVELOPMENT RIGHTS

If any application for development is refused under these Regulations or conditions are imposed while permitting such development which deprive the owner of any unconsumed FAR, the said owner/lessee shall be compensated by grant of Development Rights Certificate of the nature set out in Appendix I and as may be prescribed by Government from time to time. The extent of Development Rights Certificate to be granted may be determined by the Municipal Commissioner/CEO, Municipal Corporation / Municipal Council / Nagar Panchayat or Vice-Chairman, Development Authority or District Collector, on the advice of the Heritage Conservation Committee.

10.2 HERITAGE FUND

With a view to give monetary help for repairs of Heritage buildings a separate fund may be created, which would be kept at the disposal of the Municipal Commissioner/CEO, Municipal Corporation, Municipal Council/Nagar Panchayat or Vice- Chairman, Development Authority or District Collector, who shall make disbursement from the funds on the advice of the Heritage Conservation Committee. The fund shall be used mainly to support the cost of listing of heritage buildings/ sites and expert guidance and fees for architects, engineers and other experts while the actual conservation works shall be supported by the owners or from sources other than the Heritage Fund.

11. COMPOSITION OF HERITAGE CONSERVATION COMMITTEE

The Heritage Conservation Committee shall be appointed by the State Government comprising of:

- | | | |
|------|---|-------------------------|
| (i) | Heritage Expert with 15 years experience in the field of heritage conservation | Chairman |
| (ii) | Structural Engineer having experience of ten years in the field and membership of the Institution of Engineers, India | 1 Member |
| | Architect having 10 years experience | |
| A) | Urban Designer | 1 Member |
| B) | Conservation Architect | 1 Member |
| iii) | Environmentalists having in-depth knowledge and experience of 10 years of the subject matter | 1 Member |
| iv) | Historians having knowledge of the region having 10 years experience in the field | 1 Member |
| v) | Natural heritage experts having 10 years experience in the field | 1 Member |
| (vi) | Chief Town Planner, Municipal Corporation / Development Authority | Member Secretary |

(a) The Committee shall have the powers to co-opt upto five additional members who have special knowledge of the subject matter. Provided, that additional members may be co-opted for special purposes or on sub-committees of the Heritage Conservation Committee.

(b) The tenure of the Chairman and Members of other than Government Departments / Local Bodies shall be three years.

11.1 TERMS OF REFERENCE:

- (i) To advise the Municipal Commissioner/CEO, Municipal Corporation, Municipal Council/Nagar Panchayat or Vice- Chairman, Development Authority or District Collector, whether development permission is to be granted under Heritage Regulations and the conditions of permission.
- (ii) to prepare a list of heritage sites, which include buildings, artefacts, structures, streets, areas, precincts of historic, aesthetic, architectural, cultural, or environmental significance and a list of natural feature areas of environmental significance, scenic beauty including but not restricted to sacred groves, hills, hillocks, water bodies (and the areas adjoining the same), open areas, wooded areas, points, walks, rides, bridle paths etc. to which the Regulations would apply.
- (iii) To advise whether any relaxation, modification, alteration, or variance of any of the Building Bye-laws is required in the context of the Regulations.
- (iv) To frame regulations for precincts and if necessary for natural feature areas and to advise the Municipal Commissioner/CEO, Municipal Corporation, Municipal Council/Nagar Panchayat or Vice- Chairman, Development Authority or District Collector regarding the same;
- (v) To advise on the extent of Development Rights Certificate to be granted, in terms of sub-regulation 10.
- (vi) To advise whether Development Rights Certificate may be allowed to be consumed in a heritage precinct (in terms of sub-regulation 10, Appendix I).
- (vii) To advise whether to allow commercial / office/ hotel use in the (name the areas) and when to terminate the same.
- (viii) To advise the Municipal Commissioner/CEO, Municipal Corporation, Municipal Council/Nagar Panchayat or Vice- Chairman, Development Authority or District Collector, in the operation of Building Bye-laws to regulate or eliminate/erection of outside advertisements / bill boards / street furniture.
- (ix) To recommend to the Municipal Commissioner/CEO, Municipal Corporation, Municipal Council/Nagar Panchayat or Vice- Chairman, Development Authority or District Collector, Urban Design Guidelines to be

adopted by those private parties or public / Government agencies who sponsor beautification schemes at heritage sites.

(x) To advise the Municipal Commissioner/CEO, Municipal Corporation, Municipal Council/Nagar Panchayat or Vice- Chairman, Development Authority or District Collector, to evaluate the cost of repairs to be given to owners to restore the existing buildings back to the original condition. For this purpose the Committee may also try to help the ULBs/RLBs to raise funds through private resources.

(xi) To prepare designs / publications for listed buildings, control of height and essential façade characteristics such as maintenance of special types of balconies and other heritage items of the buildings and to suggest adoption of appropriate materials for replacement keeping the old form intact to the extent possible.

(xii) To advise the Municipal Commissioner/CEO, Municipal Corporation / Municipal Council / Nagar Panchayat or Vice- Chairman, Development Authority or District Collector on any other issues as may be required from time to time during course of scrutiny of development permissions and in the overall interest of heritage conservation.

(xiii) To appear before the Government, either independently or through or on behalf of the Municipal Commissioner/CEO, Municipal Corporation / Municipal Council / Nagar Panchayat or Vice- Chairman, Development Authority or District Collector, in cases of Appeals under Development Authority / Municipal Corporation Act in cases of listed buildings and listed precincts and listed natural feature areas.

11.2 OPINION OF THE HERITAGE CONSERVATION COMMITTEE

Nothing mentioned above should be deemed to confer a right on the owner / occupier of the plot to demolish or reconstruct or make alterations to a heritage building / buildings in a heritage precinct or on a natural heritage site if in the opinion of the Heritage Conservation Committee, such demolition / reconstruction / alteration is undesirable.

11.3 APPROVAL TO PRESERVE THE BEAUTY OF THE AREA

The Heritage Conservation Committee shall have the power to direct, especially in areas designated by them, that the exterior design and height of buildings should have their approval to preserve the *beauty of the area*.

11.4 OWNERSHIP NOT AFFECTED

Sale and purchase of Heritage Buildings does not require any permission from the Municipal Commissioner/CEO, Municipal Corporation / Municipal Council / Nagar Panchayat or Vice-Chairman, Development Authority or District Collector, or the Heritage Conservation Committee. The Regulations do not affect the ownership or usage. However, such usage shall be in harmony with the said listed precincts / buildings. Care shall be taken to ensure that the development permission relating to these buildings is given within 60 days.

APPENDIX – I

REGULATIONS FOR THE GRANT OF TRANSFERABLE DEVELOPMENT RIGHTS TO OWNERS/LESSEES OF HERITAGE BUILDINGS/HERITAGE PRECINCTS AND CONDITIONS FOR GRANT OF SUCH RIGHTS.

As provided for in Regulations 10.1 the development potential of a plot of land may be separated from the land itself and may be made available to the owner of the land in the form of **Transferable Development Rights (TDR)**. These rights may be made available and be subject to the conditions prescribed below:

1 As proposed in the Regulations, Development Rights of the owners/lessees of any Heritage Buildings who suffer loss of Development Rights due to any restrictions imposed by Commissioner/CEO, Municipal Corporation/Municipal Council/Nagar Panchayat / Vice Chairman, Development Authority / District Collector or Government under these Regulations shall be eligible for award of **Transferable Development Rights (TDR)** in the form of Floor Area Ratio (FAR) to the extent and on the conditions set out below. Such award shall entitle the owner of the Heritage Building to FAR in the form of a Development Rights Certificate (DRC) which he may use himself or transfer to any other person.

2 A DRC shall be issued only on the satisfactory compliance with the conditions prescribed in this Appendix.

3 If a holder of a DRC, intends to transfer it to any other person, he shall submit the DRC to the Commissioner/CEO, Municipal Corporation/Municipal Council/Nagar Panchayat / Vice Chairman, Development Authority / District Collector with appropriate application for an endorsement of the new holder's name, i.e. transferee on the said Certificate. Without such an endorsement, the transfer shall not be valid and the Certificate shall be made available for use only by the earlier original holder.

4 A holder of a DRC who desires to use the FAR credit certified therein on a particular plot of land shall attach to his application for development permission valid DRCs to the extent required.

5 DRCs may be used in conformation to section 7 of APPENDIX I

- 6 A DRC shall not be valid for use on receivable plots in the areas listed below:-
- (a) All listed congested areas where extra FAR shall not be allowed.
 - (b) On plots falling within 50 m. on roads on which no new shops are permitted as per Development Plan/Master Plan/Zonal Development Plan.
 - (c) Any heritage building.
 - (d) Any heritage precinct except with the prior approval of the Heritage Conservation Committee and subject to compliance with the Regulations of that particular precinct.

7 The user shall be permitted for utilization of the DRCs on account of transfer of Development Rights as under:-

Zone in which designated/reserved situated	Uses to be permitted in receiving areas Plot is situated
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- | | |
|------------------|--|
| 1. Residential | ..Only residential uses and in Residential zones only. |
| 2. Commercial | ..Commercial, if the plot where FAR is to be utilised is situated in Commercial Zone. |
| 3. Institutional | ..Institutional if the plot where the FAR is to be utilised is situated in Institutional Zone. |
| 4. Industrial | ..Industrial if the plot where the FAR is to be utilised is situated in Industrial Zone. |

8 DRCs may be used on one or more plots, whether vacant or already developed or by the erection of additional storeys, or in any other manner consistent with these Regulations, but so as not to exceed in any plot the total built-up FAR higher than that prescribed in clause 9 below.

9 The FAR of a receiving plot shall be allowed to be exceeded by not more than 40 in respect of a Development Right transferred to it. (whether in respect of a heritage building or other).

10 With an application for development permission, where a owner / lessee seeks utilization of DRCs, he shall submit the DRCs to the Commissioner/CEO, Municipal Corporation/Municipal Council/Nagar Panchayat/ Vice Chairman, Development Authority / District Collector who shall endorse thereon in writing in figures and words, the quantum of the DRCs proposed to be utilised, before granting development permission, and when the development is complete, shall endorse on the DRC in writing, in figures and words, the quantum of DRCs actually utilized and the balance remaining thereafter, if any, before issue of occupancy certificate.

11 A DRC shall be issued as a certificate printed in an appropriate form prescribed by the Government. Such a certificate will be a transferable “negotiable instrument” after due authentication by the Urban Local Body / Rural Local Body concerned. The Municipal Commissioner/CEO, Municipal Corporation, Municipal Council/Nagar Panchayat or Vice-Chairman, Development Authority or District Collector, shall maintain a register in an appropriate form of all transaction

Legislation that offers protection for heritage assets has developed in a piecemeal fashion. It uses a variety of terms to identify the essence of what makes a heritage asset valued and worthy of protection. The law refers variously to the architectural, historic, artistic, traditional and archaeological interest of heritage assets and the character that derives from those attributes— Historic England

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