LANDSCAPE INTEGRITY FOR SACRED AND HISTORIC SITES OF WAI REGION, MAHARASHTRA

DESIGN THESIS

Thesis submitted in partial fulfillment of the requirements for the award of the degree of

MASTER OF LANDSCAPE ARCHITECTURE

By

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2014MLA017

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May, 2016

DECLARATION

I **Neha Apre** , Scholar No. **2014MLA017** hereby declare that the thesis titled **Landscape Integrity for the Sacred & Historic Sites of Wai region, Maharashtra** submitted by me in partial fulfilment for the award of **Master of Landscape Architecture**, at **School of Planning and Architecture, Bhopal**, India. is a record of bonafide work carried out by me. The matter/result embodied in this thesis has not been submitted to any other University or Institute for the award of any degree or diploma.

Date: 25 /05/16 Neha Shashikant Apre

CERTIFICATE

This is to certify that the declaration of **Neha Apre** is true to the best of my knowledge and that the student has worked under my guidance for one semester in preparing this thesis.

RECOMMENDED

THESIS COMMITTEE

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ACKNOWLEDGEMENT

First and foremost, I am grateful to The Almighty God for for endowing me with health, patience, and knowledge to complete my thesis.

I have been grateful to have had the guidance & blessings from the late Ar. M Shaheer.

I would also like to thank our Head of Architecture Department Dr. Rachna Khare for her direction especially on research & design structuring. I wish to express my sincere gratitude to Ar. Savita Raje, for her constant support, encouragement and guidance through the research, framework & design of the thesis.

I take this opportunity to express my indebtedness towards Ar. Saurabh Popli for his persistent guidance, encouragement and invaluable support throughout the study.

My sincere thanks to Ar. Sonal Tiwari, for her timely guidance and support in framing the structural hierarchy for my thesis. I would also take the opportunity to thank Ar. Shrikant Bhale and Ar. Arshiya Qureshi, who have given my thesis a practical insight and guidance without which this research would have not have been possible

I would like to specially thank my mentor Ar. Suneet Mohendru for his valuable insights and guidance on the topic. My deep gratitude to Ar. Vishakha Kauthekar Ar. Anushree Barman, Ar. Swati Sahasrabudhe for their kind support & guidance.

I wish to express my deepest gratitude to my inspiration, my family father Shashikant Apre & mother Savita Apre for their endless love, faith, patience and understanding throughout my life which helped me in making this endeavor a reality.

I would like to thank all my close companions, especially Shatavisha Roy, Tejashree Kulkarni, Aditi Galande, Sukhruti Gupta & Vaibhav Abhag for their encouragement and cooperation without which this journey would not have been possible.

The Archaeological Survey of India, Pune, INTACH, Wai & Pune, Wai Municipal Corporation have been very helpful and supportive. I would also thank Mr. Desphande and Mr. More from Wai for their support and help.

ABSTRACT

Landscape Integrity the authenticity of historic identity, that reveal a presence by the survival of physical characteristic that existed during the historic and prehistoric period. The 7 qualities of integrity are:

a. Location 2. Setting 3. Feelings 4. Association 5. Design 6. Workmanship/ Material Integrity measures in wholeness intactness of Natural and cultural heritage and its attributes.

Examining the condition of integrity therefore requires assessing the extent to which the property it includes all the elements to express its outstanding universal value also ensure the complete reprenstation of the feature and processes which conveys the property's significance and development or neglect.

The integrity can be achieved through memory, experience, interaction, consideration. It helps to built 'a city image'. The landscape integrity is explained by the language of Landscape and gives a transcendent experience – cultural value and visual composition of forms Forms and Meaning by Amita Sinha

Studying 'Landscape Integrity' with the case of Wai Region of Maharashtra. It's a Sacred, Historic and cultural site. It has settlement since 900A.D and some of the Pandavkalin structures – temples, forts, the Buddhist caves and later in Pehwa's rule the temple town Wai and village like Menavali and Dhom were developed. It's a river valley settlement and at present the occupation is agriculture. MIDC have set up their industries in the foothills. As this region is only 30 km away from the famous hill station Mahabaleshwar and 85 km from Pune city it has become the two tier city of Satara District and tourism is developed. Due to the development the Natural resources – River, Hills, Vegetation, etc. Cultural resources – Settlements, the temples, Ghats, etc. is getting affected as haphazard development taking place. The Wai Region has a majestic landscape which is getting disturbed. So the study to integrate these sources and frame it in one is a solution to intact this river valley town.

CONTENTS

FIGURE CONTENTS

1. INTRODUCTION TO THE STUDY AREA:

River and their valleys have sustained settlements throughout our history. River Krishna has long defined the boundary between Maharashtra and other southern areas.
Geographic Setting
Topography, climatic and the building resources available locally influence the expression of an area. A short description of the geographic setting of Maharashtra is given here. The region known as Maharashtra is divided into three defined areas.

1. Konkan
2. Ghats
3. Desh

Konkan – Narrow coastal strip about forty kilometers wide. Heavy rains fast flowing rivers and red lateritic soils characterize this region. It is agriculturally productive. During monsoon this region gets cut off from the area because of inaccessible passes. The different climate and geography has given rise to a subculture distinguishable from rest of the Maharashtra.

Ghats – the ghats rise from konkan coast and characterized by steep separated peaks and few passes. The mountains have flat tops (being volcanic in origin) and are therefore ideal for construction of forts. The only items of trade are forest products.

Desh – It falls under rain shadow region and is agriculturally unproductive expect for eastern region. It has three main river valleys Purna – Tapti, Godavari and Krishna Bhima.
The desh is divided in to a number of smaller components that are as follows:

1. Mawal – This region is characterized by yhe river valley and plateaus. It is largely agriculture dependent. Under the Peshwa rule a lot of migration from Konkan to this area took place.
2. Desh
3. Marathwada
4. Vidharbha
5. Khandesh

The study area comes under Mawal Region.

Wai region is the source region of R. Krishna which forms a part of Upper Krishna Basin. The selected area i.e. the west part Wai is situated 12 km from the origin of the River (Kshetra Mahabaleshwar) at 4500 msl.
The predominant element that unifies Wai Region is the sacred River Krishna.

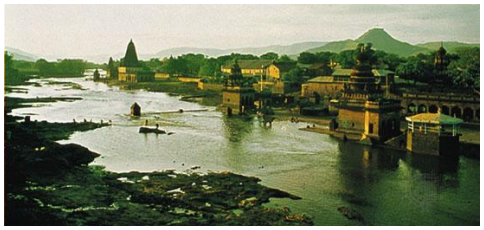


Figure 2 Wai Town

Figure 1Menavali Village

Figure 1 Dhom Reservoir

1.1 Culture:

The Wai region is an intersecting composition of various religions – Hindu, Muslim (predominantly Brahmin families Peshwa) and ancient traces of Buddhist influence.

The ancient period of Satvahana and Shilahara Kings, the Hindu Muslim battle, the stability and prosperity brought by Maratha King Shivaji, the flourishing of architecture and town planning during Peshwa period (the Formative Phase – 18th C), the pre independence Colonial development, the post independence green and the contemporary 20th C development are the predominant phases which determine the culture of the region The sacredness of the River Krishna as 'Mother Goddess' "Krishna mai" is the vital aspect of the culture, which links the present with the past

The religious institutions like the Pradnya Pathshala at wai are equally significant as the contemporary institutions. The riverfront characterized by ancient temples and Ghats is an integral part of cultural life of people as important is the contemporary recreational amenity at Dhom Dam

The spiritual meaning given by people to the natural features such as hill or a long living tree like Peepal is a significant aspect in the study area. The agricultural land and the rural life are also the characteristic elements which form a predominant factor in the economy of the region

The natural forest landscape of the River valley, with the surrounding upland has influenced the culture and vice versa. This has resulted into a humanized landscape of agriculture and settlements (religious and agriculture based) inseparable from its culture

1.1 a The Natural Landscape:

The Natural landscape of the region consist of the youthful river (now a regulated river), its fertile but narrow valley composed of black cotton soils, streams cutting through the rocky outcrops of layered Deccan Trap and the surrounding hill ranges giving a felling of enclosure and are elements which impart a unique and distinctive character to the overall landscape of the region. The topography and the dendritic drainage pattern form an integral part in sitting of the settlement. E.g. Wai town is conspicuously located on a portion between the two streams

1.1bThe Humanised Landscape – the evolution

The natural landscape was shaped over the centuries by various groups of people, religious and their way of life along with the natural ecological processes

1.2 NEED OF THE STUDY

1. The sacred quality of the River Krishna and its mythological significance
2. Unique visual appeal of the landscape (source valley of R. Krishna)
3. Utilitarian significance with rich agricultural land, in the fertile source valley of River Krishna
4. Historical significance as this area mainly flourished during 18th C Peshwa period with earlier Muslim and later colonial influence
5. Cultural gatherings, pilgrimage
6. Settlement pattern – vast agricultural landscape in the fertile valley, dotted with settlement along the river Krishna (the streams from the natural boundaries) with the surrounding steep hill slope
7. Environmental significance as the selected stretch is sensitive portion of the regulated river which occurs immediately downstream of the dam(constructed 1976)
8. Ecological aspect of the area as the watershed for River Krishna with concerns, hence role of landscape architect becomes important
9. The importance of its homogeneity in terms of
   a. The natural landscape of a narrow, fertile valley of river Krishna
   b. History(From 900B.C – till now)
   c. Culture (predominantly Hindu Brahmin Community, well educated financially stable population with common religious beliefs, ritual, life style) and cultural links between various settlements
   d. Architectural styles (Maratha style of architecture use of material and mode of construction for sacred and secular architecture) displays a visual continuity in the landscape
10. The sequential transformation of landscape from
    the forest landscape
    the rain fed and river based agriculture
    the canal based agriculture
    the agriculture based rural settlements with their cultural beliefs and the contemporary redensification and urbanization of wai, contradicting the natural and agricultural landscape pattern needs to be studied to understand significance of the regional landscape in the present context

1.3 NEED OF THE PROPOSAL

The landscape undergoing change

1. Environment change
    - The pollution of River Krishna and the stream joining it is at an alarming rate, which needs immediate action to preserve the quality
    - The area of study is adjunct to the famous hill station Mahabaleshwar which attracts large amount of people. Impact due to development of tourism. Wai is halting point and religious visit to the study which degrades the riverfront
    - The industries has come up on the foothills of towards the north west which is likely to cause severe pollution of fresh water streams
    - The deforestation for development
    - Morden agricultural practices
    - Using non native species such as Eucalyptus adversely affecting the water table and the soil
2. Change in traditional land use pattern
    - Change in land use can destroy the distinctive landscape character, new development obstruct the use and adversely affect the water edge and environmental value
    - MIDC has started implementing the industrial development in this region
3. Non vernacular landscapes
    - Use of exotic species
    - The materials and forms used and are not responding to the surrounding natural landscape
    - The designed non traditional landscape are totally obstracting the valuable landscape character of the region

4. Pressure on open spaces (land, water, vegtation) and rural settlements
    - Address the regional concern e.g. agriculture, river regulation forestry, industrialization and impact on regional landscape

5. Integrated approach
    - Proposals address the issues collectively
    - The area needs to be considered in totally rather than focusing only on urban areas. It should consider as a part of the whole region
    - Need to conserve and enhance the distinctive landscape character through development based on cultural and environmental consideration before losing it completely

1.4 INTRODUCTION TO WAI REGION:

Wai Region is (12 km from famous hill station in Maharashtra- Mahabaleshwar and 95 km from Pune), a Physical manifestation in form of land, water, Ghats, temples, forts, river associated activities like agriculture, based settlements, river regulation and its associated structures.

It's a riverine landscape that has evolved through years the religious character and the uniqueness of the man made.

As a part of Western Ghats comprises of source of river Krishna and the associated watershed area(River Walki joints R. Krishna from North in this region.)

R. Krishna locally known as Krishna mai as mother is been considered as a sacred river from ancient period(source- Krishna Mahatmya). The settlement in Wai town is known as 'Dakshin Kashi'. The river course in this region is surrounded with temples, ghats and associated settlements.

As per the historical records this region was a dense forest (still some parts are dense and declared as reserved forest) rich in flora and fauna and other natural recourses. R. Krishna was known for its crystal clear and cool waters all throughout the year.

The settlement in this region existed from approximately 230 B.C as it is evidenced from the Satavahana coins found here.

The settlements are agriculture based. Menavali can and is called a resort town as the focus was a resort Wai town is an important area undergoing urbanization process in a haphazard manner.

The river morphology narrow river valley surrounding topographical features certainly possess a scenic quality forming an important component which is further enhanced by the interesting profile of ghats and sitting of temples along the course of the river (17^{th} 18^{th} C). This certainly is a valuable assets along the with the spiritual significance of the river.

The people and culture of Wai Region evolved and developed from natural and spiritual forces existing within and outside.

The focus of study is the landscape, which is associated with rituals practices, beliefs, and related social fabric – The human relation with native environment in the past

1.5a) AIM –

To study the Landscape integrity for the Sacred and Historic sites which can cater as a open public space for the city of Wai, Maharashtra.

1.5b) OBJECTIVES –

1. To Understand the genesis of Landscape integrity of Wai Region and understand its distinctive character and also identity the changing character

2. Evolution of landscape pattern along the sacred R. Krishna(natural and cultural recourses)

3. To establish landscape integration of the open spaces along the heritage structures/ ecological recourses through linkages and elements of landscape.

4. To the role of heritage, as a city memory and to survey the need for social spaces in the city.

5. To establish landscape integration of open space around the sacred and historic sites of wai region through linkages and the elements of landscape

6. To evolve a sensitive landscape design through linkages and elements of sacred and historic sites in present context. The proposal which specifically addresses to integrate a relationship of landscape to structure, people's association to the site.

7. To identify the issues associated with the present status of landscape and with future trends causing changes and adversely affecting the ecology and character of the landscape

1.5c) SCOPE –

The study will primarily be based upon the Historic and Ecological values of the site and the role they play in defining the landscape of the heritage place. The defined landscape will enhance the significance of the heritage place to serve the purpose of urban recreational need and how it can help in exhibiting tourism potential, educational resource, and socio cultural implication.

1.5d) LIMITATION:

The study part id undertaken – between the two prominent ridges. The analysis and design strategies will be given for the region and a design proposal will be given on a cultural significant and the site is is affecting the most by the tourist and development, it will be a model which can be implemented on the other similar culturally significant open space of the city which be used as a public open spaces in the heart of the city.

1.6 METHODOLGY:

THESIS METHODOLOGY

Background Study

- City Level → History
  Study of geographical, social – public spaces/ Civic, historic character, aesthetics and administrative
- Study Area Level → Chronological Development of the City and tangible aspects and its historical layering's
  Important areas in terms of Linkages of the city, image ability, activities and tangible and intangible aspects.
  Existing Scenario- Issue

Data Collection

- Literature Study → Identification of historic landscapes
  1.Heritage landscape values
  2. Describing landscapes
  3.Organizational elements of the landscape
  4.Identification and conservation of designed landscapes
  5.Heritage conservation
  6.Landscape development of historic sites
- Case Studies → For Historic Landscapes setting – Kyoto, Japan and Pavagadh, Gujrat
  Identify the open spaces in the communities – Godavari Riverfront Nanded
  Connecting the heritage place – Varanasi City – Assi Ghat
  Streetscapes

Inference and Conclusions

- Primary Data, Site visit and surveys → 1.Heritage landscape values
  2.Identifying historic context in the natural landscape setting
  3.Study Heritage conservation: (landscape within historic complexes) - responses and clues for landscape design
  4.Responses to function:
  - In relation to surroundings
  - Responses to architecture
  - Restoring the character

Formation of Design Proposal

Design Proposal

- Analysis of Data
- Site Potential
- Site Issues

Landscape Design Proposal

Evolve a landscape design for the heritage complex in the present context.
The proposal which addresses to maintain a relationship of landscape to structure, people's association to the site.

ANALYSIS OF DATA	METHODS TO ANALYSE THE DATA	OBSERVATIONS FOR THE PROPOSAL
Over the years of Development (layers)	Development Authority, ASI, INTACH and an Interview of a Historian, Planner	
PHYSIGRAPHY ON SITE	Maps from Development Authority, Toposheets- Survey of India, Research Papers	
HISTORIC TIME LINE : Chronological Development of the City and tangible aspects and its historical layering's	Research papers, Books for the timeline of the City, ASI – Timeline, an Interview the Historians, Archeologist, citizens, Documentations	Observation will help to consider the data for designing and considerations of all the documentation from past to present and role of tangible and intangible aspects of the place and how it is changing landscape
HERITAGE AND CITY : Important areas in terms of Linkages of the city, image ability, activities and tangible and intangible aspects.	Activity Mapping – on Site, Survey's, Study of intangible aspects – Books, interviewing citizens, Planners.	
RELATIONSHIP OPEN SPACE IN THE CITY : Identification of changing landscape through physical and aesthetic experience	Mapping the tangible and intangible aspects through photographs and Research papers, books, journals	Observation will give an overview of the changing landscape character and surroundings and analyses for the proposal

1.6a LANDSCAPE CHARACTER –

(Source - An Approach to Landscape Character Assessment October 2014 Christine Tudor, Natural England)

It is defined as the distinct, recognisable and consistent pattern of elements in the landscape. It these patterns that give each locality its 'sense of place', making one landscape different from another, rather than better or worse. In defining the combinations of components which make each landscape unique, landscape character is a way of thinking about landscape more holistically and objectively, rather than focusing on scenic beauty and subjective responses. Landscapes have evolved over time as a result of both natural and cultural processes.

Landscape	Desk study
Natural factors	
Geology	Geology (solid and drift)
Landform	Landform/topography
	Geomorphology
Hydrology	Rivers and drainage
	Water quality and water flows
Air and climate	Climate
	Microclimate
	Patterns of weather
Soils	Soils
	Agricultural Land Classification (ALC)
Land cover/flora and fauna	Habitats/biodiversity
	Land cover
	Vegetation cover
	Tree cover - forest/woodland etc
Cultural/Social factors	
Land use (and management)	Land cover
	Agricultural land use
Settlement	Settlement patterns
	Building types and styles
	Materials
Enclosure	Pattern and type of field enclosure (rural)
	Urban morphology
Land ownership	Land ownership and tenure
Time depth	Archaeology and the historic dimension
Cultural associations	
Art, literature, descriptive writings, music, myth/legend/folklore, people, events and associations	Obtained through desk review
Perceptual and aesthetic factors (largely ascertained via field study)	
Memories	Obtained via stakeholder engagement
Associations	
Perceptions	Some aesthetic factors might be identified as part of the desk study e.g. sense of wildness, remoteness and tranquility
Touch/feel	Identified largely via field survey
Smells/sounds	
Sight	

Figure 1.6a Study for region

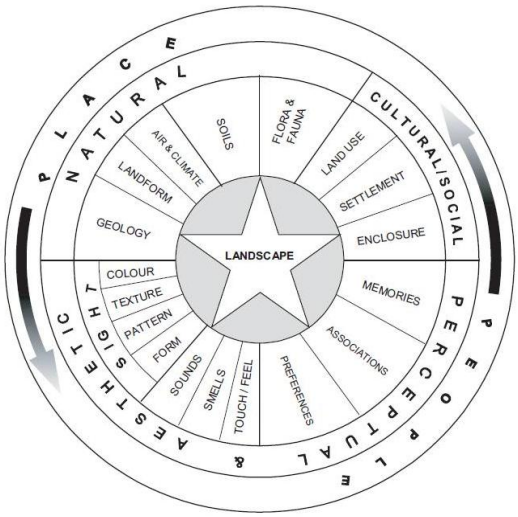


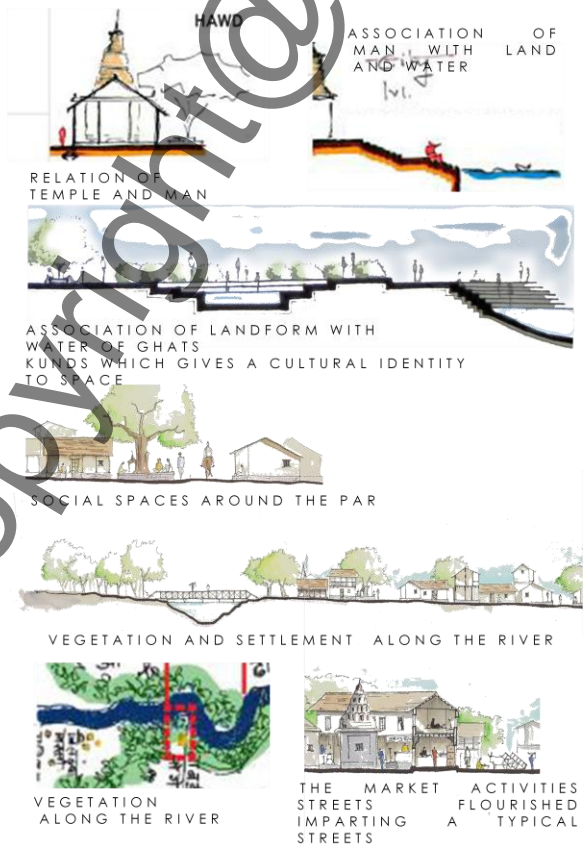
Figure 1.6a Landscape Character Symbol

1.6b WAI REGION

Natural ecology	Cultural ecology
Natural Ecologic Feature	Culture Cultural area History Landscape

	Tangible elements	Intangible Element
▪Geomorphology ▪River System (Hydrology) ▪Geology ▪Soils ▪Ground water ▪Climate and Rainfall ▪Vegetation ▪Cropping Pattern	▪Cultural Events(festivals, melas, fair, social gathering, etc.) ▪Rituals ▪Cultural links ▪Patterns of movements ▪Tourism ▪Agricultural practices ▪Trade ▪People(social fabric) ▪Built forms ▪institutions	▪Mythology ▪History, events associated ▪Religion ▪Beliefs ▪Values, meanings attached to natural and man made objects ▪Sense of place ▪Language ▪Arts(literature, music, paintings, drama)

1.6b IMPORTANT RESOURCES OF ANCIENT CITIES



2. IDENTIFICATION OF HISTORIC LANDSCAPES

((Source General guideline for Indentifying and evaluating historical landscapes Environmental Program California Department of transportation Sacramento, California, , February,1999))

A geographic area which has undergone past modification by human design or use in an identifiable pattern, or is the relatively unaltered site of a significant event, or is a natural landscape with important traditional cultural values could be a historic landscape.

Any geographic area which possesses a notable human relationship with the land and tangible physical features might be considered a cultural landscape of some sort, but many lack qualities which could possess the potential for historical significance.

Landscapes with virtually no potential for eligibility because of age, lack of any significant associations, or substantial loss of integrity can usually be dismissed from consideration in a brief statement without conducting a formal evaluation.

Generally, only identifiable landscapes over 50 years old which possess some level of significance and integrity will require a full formal evaluation to determine eligibility.

Robert Z. Melnick‘s study, (Z.Melnick's, 1984), was the first formal introduction of historic landscapes to the National Park Service. (Z.Melnick's, 1984)(Page 8) provided a useful definition and identification guide that would apply to many landscapes:

Figure 1Example of Historic Landscape

Figure 1.1 Example of Rural Historic Landscape

1.1 Rural Historic Landscapes:

A historic rural landscape district is a geographically definable area, possessing a significant concentration, linkage, or continuity of landscape components which are united by human use and past events or aesthetically by plan or physical development. Usually, a rural historic district will be distinguishable from its immediate surroundings by visual changes, such as landscape spatial organization, density, scale, or age; and by historical documentation of different associations or patterns of development.

All through history of development man has expressed his cultural values and aesthetic preferences by way of giving shape to his living environment. A pure need for shelter has led to the creation of architectural marvels - seeming to be completely synchronized with the prevalent environmental conditions and available building technology. An urge to bring in natural elements in an 'ordered' form within the designed environment has led to the creation of landscapes that not only give meaning to his built premises but also serve as settings to receive the same.

2.1 ICOMOS (International Council of Monuments and Sites) defined 'Historic Landscape' in Its Venice Chapter of 1971 as 'the urban or rural setting in which it found the evidence of a particular civilization, a significant development or a historic event. These may classify into the following:

1. *Natural landscapes:*
   The regional setting containing the designed environment, its chief component being Physiography, vegetation and hydrological features.

2. *Cultural Landscapes:*
   Landscapes other than pure nature, those that are a result of human activity on the natural fabric, emerging as utilitarian patterns, e.g. Terrace Farming.

3. *Designed Landscapes:*
   Creative design expressions associated with architecture or Independent often meant to bring order to the natural environment.

Based on the location or setting in the regional fabric can be classified as:
• Monuments In urban setting e.g. Shaniwar Wada, Pune
• Monuments In rural setting e.g. Kailash Temple, Ellore
• Archaeological remains in rural setting e.g. Ajanta Caves, Aurangabad
• Parks/gardens of historical Importance e.g. Degiri Fort (Daulatabad Fort), Aurangabad
`Issues and approach to the site will vary accordingly.

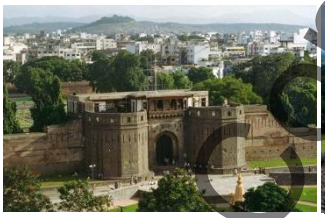


Figure 2.1 Shaniwar wada, Pune in an urban setting

Figure 2.1.2 Ellora Caves and Ajanta Caves, Aurangabad

2.3 HERITAGE LANDSCAPE VALUES: INTERNATIONAL DECLARATIONS AND GUIDANCE

There is interest and concern about heritage landscape values at an international level. The UNESCO World Heritage Convention (1972) and the Operational Guidelines for the Implementation of the World Heritage Convention (1992) promote the conservation of cultural landscapes as part of the common heritage of 'mankind as a whole'.
This means that landscapes of cultural value can be inscribed on the World Heritage List. Tongariro National Park was included in the World Heritage List in 1988 for its natural landscape values, and following changes to the Operational Guidelines, was recognized for its cultural values in 1993.

Following the International Charter for the Conservation and Restoration of Monuments and Sites of 1964 (the ICOMOS Charter or also known as the Venice Charter) a number of charters have gone beyond a strictly monument's approach.
For example, the ICOMOS Florence Charter of 1982 promotes the conservation of historic gardens and the Washington Charter promotes the conservation of historic towns and urban areas. In Europe, the European Landscape Convention – The Florence Convention – also promotes the integrated protection of landscapes for the entire continent.

The World Conservation Union (IUCN) promotes the protected landscapes concept in order to promote places with communities. This is explained by its Task Force Leader, Jessica Brown:

Thinking on protected areas is undergoing a fundamental shift. Whereas protected areas were once planned against people, now it is recognised that they need to be planned with local people, and often for and by them as well. Where once the emphasis was on setting places aside, we now look to develop linkages between strictly protected core areas and the areas around: economic links which benefit local people, and physical links via ecological corridors, to provide more space for species and natural processes

The cultural landscape is fashioned from the natural landscape by a cultural group. Culture is the agent; the natural area is the medium, the cultural landscape the result. (Sauer 1925, 6)

2.4 The term **"cultural landscape"** was introduced to U.S. Geography by Carl Sauer from German Cultural Geography where it originated at the turn of the century. Over the decades it designates the result of the interaction of human action in the natural landscape. The two components which describes “cultural landscape” are “landscape” and “cultural”. To evaluate landscape from a painting or literature is possibly termed as natural but the consideration of natural and manmade is classified and one would expect the differences cross culturally. E.g. – In Japan golf course is seems to be natural but not in U.S. (Rapoport, 1992 vol.II and Y.Nakamua, 1981)The perceptions of a ‘pleasing view of scenery landscape have denoted the interaction of people and place (Groth, 1997) The geographer named Carl Sauer proposed the a popular definition of cultural landscape in the essay ‘The Morphology of Landscape’:- The cultural landscape is fashioned from the natural landscape by a cultural group. Culture is the agent; the natural area is the medium, the cultural landscape the result. (Sauer 1925, 6)

Figure 2.4The Rock Shelters of Bhimbetka are in the foothills of the Vindhyan Mountains on the southern edge of the central Indian plateau. (UNESCO Website)

Figure 2.4. The rice terraces of the Philippines Cordilleras are living cultural landscapes devoted to the production of one of the world's most important staple crops, rice. They preserve traditional techniques and forms dating back many centuries (2000 years) (UNESCO Website)

2.4. The world comprise of numbers of examples; in India – maidan, gardens, settlements, dwellings and talaab they are manmade interventions in nature.

Figure 2.4 .A. Maidan - Shaniwar wada, Pune B. Open space around the settlement – Tulsi Baug, Pune C. Talaab - Public Open Space – Pashan Lake

2.4.1 Cultural Landscape

(Source - (Taylor))

In December 1992, the World Heritage Committee recognized the term cultural landscape as the category of sites, thirty World Heritage cultural landscapes has been officially recognized. The evaluation of cultural landscape involves the matching of perceived environment against values and ideal expressed scheme. The schemes evaluating the cultural landscapes – the real landscapes are evaluated in the term of cultural landscapes. The cultural landscape is a reflection of some schemes of an ideal landscape gives an concrete expression through the system of rules which includes what to choose and what should be emphasized and how to arrange and organize things. The sense of cultural landscape approximate the ideal notion, ideal people, living ideal in ideal environment (Rapoport, 1992, vol. II); as a brief investigation of endemic notion of time, space, nature and culture in the society helps us to explore their bearing on cultural landscape in India also its preservation in that case. The concept of cultural landscape is clarified by two components – "landscape" and "cultural" as mentioned above.

Figure 1.4.2 Landscape (Google)

1.4.3 Cultural (Google)

2.4.2 Landscape –

The origin of this term from 'paintings' as 'landscaping', the concept generated was 'landscape design'. Landscape here does not refer to artistic or literature meaning of the visible natural world, as it was through 19th century, nor refers to 'natural' scenery. The integration of natural and human phenomena on the earth. The landscape, as a system of settings are related to human life, and the primary living and working which are symbolic and the meaning leads that they are cultural. Most of the landscapes are results of human action, as it was said in 1956 there was no place left on earth was least modified or influenced by the human action. Human intervention of the landscape became clear after the advent of agriculture, later it included gardens, terraces, settlements, dwellings, etc. alike village in India; introduced a transformation of the land.

2.4.3 Cultural –

The word 'cultural' comes from Latin *'colere (colui, cultum)'* which originally means to cultivate (the soil)', a clear human action to subdue nature. 'Landscape' ('shaping the land') implies at first sight a human intervention. It defines all the human beings. All the landscapes are at least modified through human action, are lived and have meaning this makes the cultural. The specific groups are – the use of house forms villages, field forms, street pattern, gardens and other elements. Some landscape like high style and contemporary ones vary over the time (H.Glassie, 1968) and characterized by rapid change of transformation. The creation of cultural landscapes can be shown to be related not only to various aspects of culture through wants and choices, but to the constraints operating in various situations.

2.5. DESCRIBING LANDSCAPES

The Secretary of the Interior's —Guidelines for the Treatment of Cultural Landscapes‖ describes landscapes in terms of larger organizational elements (spatial organization and land patterns), followed by individual features (topography, vegetation, circulation, water features, structures, buildings, furnishings, and objects) that may contribute to a landscape's historic character. The arrangement and interrelationship of these character-defining features should be described as they existed during the period of significance. Situations vary, and some features will be more important than others in a particular landscape, but landscape features should always be assessed as they relate to the property as a whole. Visual character, intangible qualities, and a landscape's feeling and association should also be conveyed, along with the physical description.

2.6 ORGANIZATIONAL ELEMENTS OF THE LANDSCAPE

2.6.1. Spatial organization and land patterns:

Spatial organization is the three-dimensional arrangement and patterns of natural and cultural features in a landscape. It includes visual links or barriers, such as fences and hedgerows; open spaces or visual connections, such as topography and bodies of water; and groupings or clusters, such as farmsteads. Both the functional and the visual relationships between spaces are integral to the historic character of a property.

2.6.2 Character-defining Features of the Landscape

2.6.1 Topography:

The shape of the ground and its height or depth are character-defining features, whether naturally or artificially created. Topographic features may contribute to the creation of outdoor spaces, serve a functional purpose, or provide visual interest.

2.6.2 Vegetation:

Vegetation may derive significance from historical associations, horticultural or genetic value, or aesthetic or functional qualities. It is a dynamic component of the landscape and subject to the continual process of plant germination, growth, seasonal change, aging, decay, and death. Vegetation may include individual plants, groups of plants, and naturally occurring plant communities or habitats.

2.6.3 Circulation:

Circulation features may include roads, parkways, drives, trails, paths, parking areas, and canals, either individually or linked into networks or systems. Their character is defined by alignment, width, surface and edge treatments, grade, materials, and infrastructure.

2.6.4 Water features:

Fountains, pools, cascades, irrigation systems, ponds, lakes, streams, and aqueducts can be aesthetic as well as functional components of the landscape. The characteristics of water features include shape, sound, edges and bottom condition and material, level or depth, movement or flow, reflective qualities, and associated plant and animal life. Water supply, drainage, and mechanical systems are important elements of water features.

2.6.5 Buildings and structures:

Buildings are roofed and walled constructions that shelter human activity, from houses, barns, and sheds, to office buildings, schools, and warehouses, to greenhouses and public restroom buildings. Structures are uninhabitable constructed features, as opposed to buildings. Structures include highways, dams, bridges, arbors, terraces, tennis courts, walls, windmills, and earthworks. Buildings and structures may be individually significant or contributing elements only of a landscape. Their placement and arrangement are important to the character of a landscape.

2.6.6 Site furnishings and objects:

Small-scale elements of a landscape may be decorative or functional or both. They include items such as benches, lights, signs, drinking fountains, flagpoles, urns, planters, trash receptacles, watering troughs, sculptures, and monuments. They may be movable, seasonally installed, or permanent. They can be single items, part of a group of the same or similar items, or part of a coordinated system, such as signage.

2.6.7 Visual Character and Intangible Qualities:

Visual character and intangible qualities can be the most compelling evidence of a landscape‘s historic qualities. Experiencing the landscape can provide a vivid sense of time and place, conveying the essential elements of feeling and association that link an area to its past. The landscape‘s visual character should be described in detail, especially those sensory qualities that are not well conveyed in photographs. Intangible qualities such as cultural values also require careful interpretation, including the perceptions of both the surveyor and local people regarding the landscape‘s feeling and association. Consideration of these qualities is essential in landscape studies, but findings must be accurately and precisely documented for credibility. Both visual and intangible landscape components must be fully described, linked to existing physical features, and placed within their historic context.

2.7. DEVELOPING HISTORIC CONTEXT

When a landscape‘s historic context has not been previously established, an adequate level of research must be undertaken to develop the appropriate context for the evaluation of the resource.

A research plan should be constructed for the work needed, but it should not exceed that which is necessary to understand the context within which the landscape is to be evaluated.

This historic context will place the property‘s theme within a time period and geographic area and provide the perspective from which to evaluate the property‘s significance. Because a landscape may reflect multiple land uses and physical evolution over many years, it may relate to more than one historic theme or period.

Knowledge of historic contexts provides direction and focus for a survey. It helps surveyors recognize landscape characteristics as integral parts of economic or social systems rather than as isolated features. For example, a drainage ditch may be part of an extensive reclamation system that allowed thousands of acres of valley land to be farmed and settled.

A written statement of historic context developed at the beginning of the study can help focus research efforts, and it can be rewritten if necessary as work proceeds. The statement should describe the landscape characteristics that a property must possess to be eligible, such as features reflecting the spatial patterns, land use activities, and water conveyance systems of a historic reclamation district.

2.8 IDENTIFICATION AND CONSERVATION OF DESIGNED LANDSCAPES

Designed landscapes are places designed and created intentionally by people. They include gardens, parks, cemeteries, avenues and individual trees. Designed landscapes may be significant because of a range of heritage values. As outlined by Heritage Victoria, designed landscapes may be significant for a number of reasons such as:

- Works of art because of the beauty of their design.
- Examples of the work of noted garden designers or architects.
- Historical records, showing the principles of garden and cemetery design from an earlier era or demonstrating how a garden‘s layout can change over time.
- A setting for buildings which are of architectural or historical importance.
- As a contribution to a cultural landscape, a component of a precinct or area of importance to our community.
- The location of a valuable plant collection or of notable individual trees, shrubs or plants.

2.9. HERITAGE TREES

Trees are an important aspect of the natural, historic and cultural environment. A tree may be a marker of an important event, as a historic source of food, a boundary marker. A large number of trees are recorded as sites and are associated with values. Trees may be listed on the notable tree register on the basis of the following values:

Stature (feature and form)

Historic values

1. Age over 100 years old
2. Association (with an eminent person or event)
3. Commemorative (as a record of a historic occasion)
4. Remnant of an original forest or planting

Scientific

1. Source (of botanical interest)
2. Rarity (found in unusual circumstances or numbers)
3. Collection

Heritage trees require special care and protection. This protection should apply to the tree fabric and its surrounding environment. In the first instance a professional arbor culturist should be contacted for advice.

Unlike a building, a tree cannot be maintained for an indefinite period. All trees decay and die. However, despite the finite life of trees, protection should still apply to the tree site.

It may be possible to commemorate the site of the tree by interpretation or by the planting of a new tree. New trees may be planted in the vicinity of the old to maintain continuity of landscape values when the old tree dies. Heritage trees should also be protected from vandalism and damage

2.10 HERITAGE CONSERVATION: (LANDSCAPE WITHIN HISTORIC COMPLEXES) - RESPONSES AND CLUES FOR LANDSCAPE DESIGN

2.10.1 RESPONSES TO FUNCTION:

Apart from serving appropriately for the proposed functions in the present context, the nature of spatial treatment can also be governed to some extent by the use that the open space was designed for, historically. This would help in reconstructing the 'context' of the space on a philosophical plane.

The landscape treatment could also be influenced by the function that the adjoining buildings were designed for. For instance, landscape Design for an open space adjoining a corner structure sited in a similar geographical situation would drastically differ in character if the

structure is meant as a defence edifice or a pleasure pavilion.

In order to analyses various situations, the functions of a space could be classified into the following heads:

· Utilitarian
· Recreational
· Aesthetic

The landscape design, if creatively conceived, could strongly help in relating the open space to its function so as to accentuate such characteristics.

2.10.2. SITING AND RELATIONSHIP TO SURROUNDINGS:

Imaginative sitting is one of the most distinctive aspects in the planning of monuments. Monument complexes and structures were

Judiciously situated so as to use the natural features to utmost advantage in:

· Providing natural defence
· Environmental benefits / climatic advantages
· Spectacular views
· Serving utilitarian needs e.g. Proximity to water bodies

The aspect of sitting has to be carefully answered by the landscape design so as not to ruin the 'prospects' of situation but help in accentuating the effects achieved by planning with respect to the site and surroundings.
While talking of relationship of the space to surroundings, there seems to be en outstanding prospect of borrowed views' except In the cases of a few private courtyards inside the palace complexes.

2.10.3 RESPONSES TO ARCHITECTURE:

2.10.3a Relationship of the landscape to the building

This provides a series of options to the designer. As a first alternative, one might think of the open space to have an exclusive identity, independent of the surrounding or contained buildings. On a larger scale it means that the open space dominates over built environment and monuments exist as 'points', In the overall landscape.

As a second option, the open space could strongly respond to the adjoining architecture
· In terms of subdivision and articulation of outdoor space, following the proportions and modules of the building geometry, i.e. extending the strong lines of the buildings in terms of axes and reference lines Into the landscape.
· Built elements of outdoor space could take clues from architectural style and building systems.
· Provision of a transitional space between the building and the landscape. The treatment of this space could help In a smooth transition between the formal geometry of the buildings and the informal 'wilderness' of the natural landscape.
In all cases, the 'dynamic processes of growth' attributed with elements of landscape and its effects on the 'form' of spatial volume that results, has to be carefully preconceived.

2.10.3b Scale:

The visual effects of a built mass depend on the proportions and dimensions and their relationship. The same holds true for the open space. A conscious effort could be made to retain the character of a monument complex by relating its scale with that of the open spaces. The 'monumental' or 'human' effects Imparted to the viewer by the building could be accentuated by manipulation of scale in landscape design.

2.10.3c Reflection of architectural style and elements in the landscape:

While built structures have a sufficiently long life, landscapes are ephemeral. As a result, we often see the ancient monument complexes standing on bare ground which

many a times results in incomplete perception of these architectural marvels since they seem to be devoid of context.
The buildings styles and architectural techniques can be studied by seeing the buildings and the entire development of the architecture can be traced by a trained eye. However, the landscape traditions associated with various eras is left to the conjectures aided by historical records in inscriptions and paintings.
While undertaking the landscape development of a historical site, efforts must be made to study the landscape traditions associated with the periods to which the architecture dates. This would ensure a more truthful design, contextually compatible with the architecture.

2.11. RESTORING THE CHARACTER:

Before dealing with a specific site, the key factors giving the area a 'sense of place' should be identified. These may be the scale or form of built volumes or the juxtaposition of open spaces - from intimate enclosures to vast expanses.
On the other hand it might just be the geographical situation commanding majestic views. The landscape design could then accentuate these very elements in principle to add to the 'character' of the place. Hence the 'soul' would remain the same; only the body would develop / change, reflecting the natural process of 'change' with 'time'

2.12. LANDSCAPE DEVELOPMENT OF HISTORIC SITES

The guiding principle is to create a landscape in terms of extent and character which will not compete with existing historical environment. Small scale designed landscapes should be as close as possible to the historical conjectures Compatible spades of plants should to be adopted. Style of landscape should follow aesthetic preferences of the original designers. Use of landscape elements should consider their viability in the contemporary scenario.

Complementarily between natural and men-made environment determines the regional 'sense of place' and identifies the essential character. Preservation and development of this character should be the major aim of landscape policy. Hence, the proposals should be aimed not only at the landscapes within building complexes but also at the conservation of the natural and cultural environment.

Instead of 'misplaced horticultural beautification' surrounding most historical monuments, the appropriate setting should be a robust landscape bated on natural vegetation and ecology of the region.' After a careful study of environmental issues, the approach should be to prevent further deterioration of the environment In terms of visual

aspects, the proposal should be specifically addressed to maintaining a relationship of structure to landscape, maintaining the skyline and; maintaining distant and close range views.

Figure 5a. Incongruous planning reduces the heritage sites to mere objects seemed to have imposed on the city fabric

Figure 5b. Thoughtfully integrated sites with the new city form could make them serve as urban landmarks.

- Disturbed 'setting as a resulted of natural and human activity
- Designed environment were conceived after an intense understanding of the landscape potential of these sites. As a result of this, these responses took important part of its setting. Once the natural setting is disturbed, the monuments appear totally devoid of context e.g. – The natural setting of Wai town as urban development has come which disturbs the elevation character of the setting.
- Axial response to the river as the temples faces west – east. As connecting linear Ghats to enjoy the setting of water, effect of floating temple and backdrop of hills.

2.14 What is Integrity???

The authenticity of historic identity, reveal the presence by survival of physical characteristic that existed during the historic and prehistoric period
The 7 quality of integrity are:

1. Location
2. Settings
3. Feelings
4. Association
5. Design
6. Workmanship and material

Figure 2.14 Define landscape Integrity

Definition of Landscape language by Anne Whiston Sprin
Landscape is a native language. Humans evolved among plants, animals, under sky, upon earth, near water. Humans sense and live the shape of landscape (place). It is said landscape was the first human text and to read clues from the nature. Description of landscape integrity through language of landscape
(Source – Forms and Meaning by Amita Sinha)

2.14A FOR HISTORIC SITES – (Source – (Guidelines for CHL Conservation)

1. Cultural Heritage Value – Landscape that are associated with history of the area, have design value and/ or have contextual value
2. Historical Integrity – Landscape that have functional continuity and or physically reflect in the past
3. Community Value – Landscape that are valued by the community
   (Source – Guidance for CHL Conservation)

2.14B INDIAN LANDSCAPE: (Source – (Heritage Resources in land use planning process – Cultural Heritage and Archaeology polices of the Ontario Provincial Statement, 2005))
3 types of Landscape

2.14Ba DESIGNED LANDSCAPE
Intestinally designed
e.g. – Planned
Garden in an urban
Setting, a square

2.14Bb EVOLVED LANDSCAPE
Use of people of whose activities has directly shaped. Includes continuity landscape where human activities are still ongoing.
e.g. – residential neighborhood, Main Street, etc. or come to an end.

2.14Bc ASSOCIATIVE LANDSCAPE
Powerful religious, artistic or cultural association as well as with cultural evidence. E.g. Sacred sites with in natural environment.

3. Case studies –

3.1 Character Case Study – Varanasi – Dasaswamedh Ghat
3.2 Regional Case study - Kyoto Landscape, Japan
3.3 Designed Case Study – Godavari River front, Nanded Maharashtra

3.1 VARANASI –

Source - (Sinha, 2014)

Rarely has any river gathered in itself so much meaning and reverence as the Ganga has over three millennia in the Indian subcontinent. The land-water interface on the Ganga's banks is fashioned out of the need to access the rising and falling water levels in the monsoon and dry seasons. The cultural landscape of this interface—ghats (steps and landings) lined by temples and other public buildings, pavilions, kunds (tanks), streets and plazas—is layered and kinetic, and responsive to the river's flow. At Varanasi, where the Ganga reverses its flow northwards, the ghats describe a crescent sweep in a 6.8 km stretch. They date back to 14th century although they were extensively renovated and extended in the last three centuries to allow access to the holy Ganga from the temples and shrines of this ancient city.

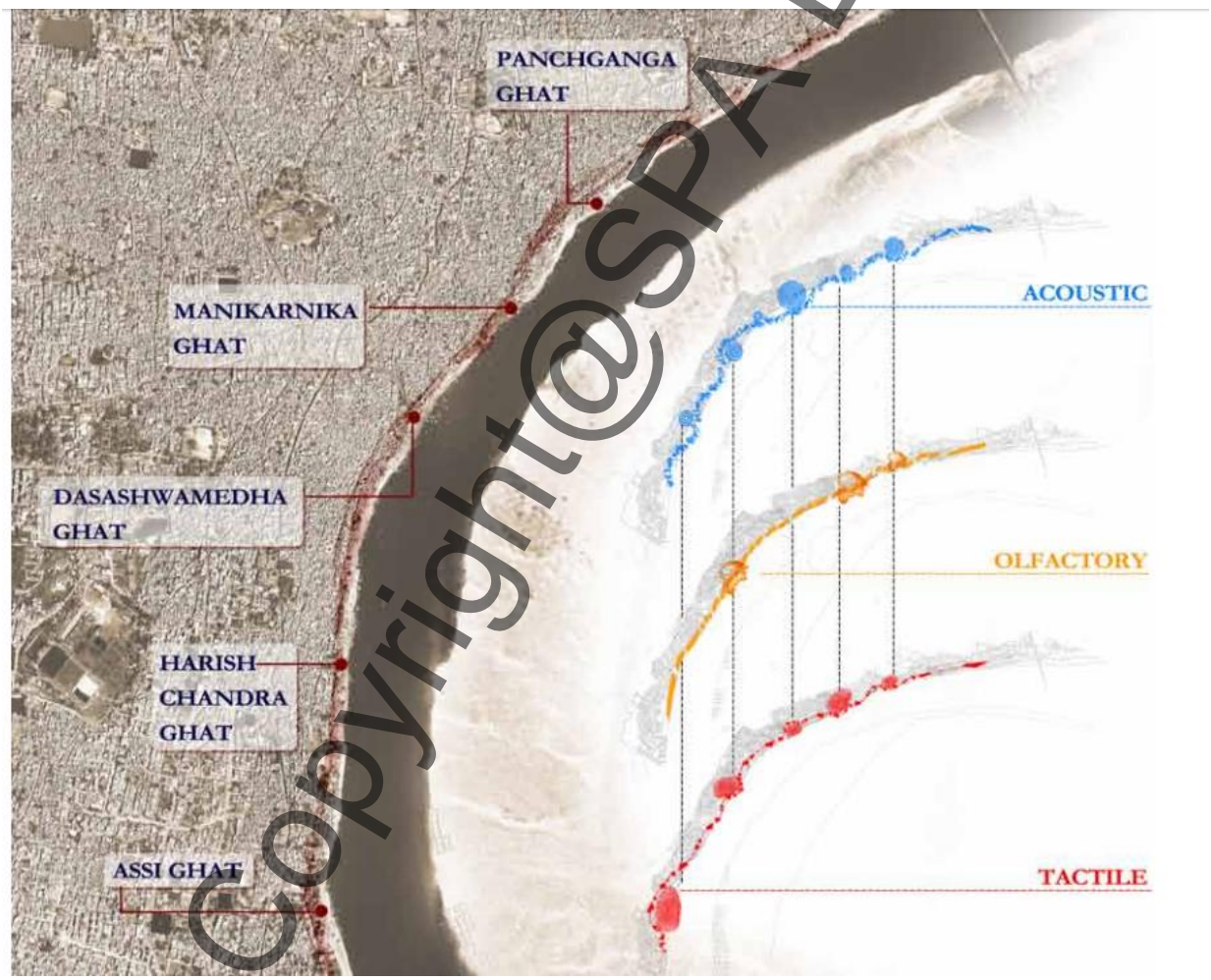


Figure 3.1 Site Plan showing Varanasi Ghats

The narrow streets of old Varanasi end at the wide landings of the ghats, leading the residents, pilgrims, and tourists to the river where they worship, bathe and cremate the dead. The ghats are public commons, ritual spaces, and cremation sites.
As such they represent an extraordinary cultural heritage in their history and as settings for continuing enactment of ancient traditions that sustain cultural memories, beliefs and values.

The cultural landscape of the ghats evolved in a spatio-temporal order created from self-organized systems of worship and pilgrimage. Its structure, complex in its layering and detail and in responding to natural processes was resilient in its recovery from natural disasters as well as cultural upheavals. However as the landscape becomes increasingly stressed from intensive use and ground and water pollution, its irreplaceable heritage is being lost. The dilapidation of the urban edge due to ill-maintenance, private encroachment, pollution in the Ganga, and increasing pressures of use caused by three million visitors every year is stretching its carrying capacity and putting heritage at risk. The shift of the river and silting of banks has impacted the riverfront landscape causing alarm among conservationists who have been pressing since 2001 to have the riverfront and the old city nominated in the UNESCO World Heritage List. Varanasi ghats fit the categories of 'an organically evolved landscape' as well as 'an associative cultural landscape' in the cultural landscape criteria. The ghats on the Ganga have evolved over centuries into the spiritual centre of Hinduism. Urban infrastructure (sanitation, solid waste management, and water supply) has been upgraded under the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) and measures have been taken to reduce the river pollution under the Ganga Action Plan launched by the Government of India. The Ghats are a thin sliver of public space between the dense city and the Ganga. There are 84 Ghats on the urban edge. Their number has increased over time as ghats were subdivided into smaller sections and the natural embankment was stepped and faced in stone. This is recommended as the protected heritage zone. The heritage zone should be developed and managed within an eco-cultural frame work that addresses environmental pollution and urban degradation. Conservation becomes a tool for reclaiming public spaces and improving the quality of public life. The overarching goal of the project is to preserve cultural values by conserving the urban fabric that is a catalyst as well as a setting for their enactments.

Figure 3.1.a Existing Site Plan (Heritage Development Plan for

Figure 3.1.b Proposed Development

Figure 3.1.c Proposed Photographs of

3.2 REGIONAL STUDY –

KYOTO LANDSCAPES, JAPAN

Source - ((Understanding the Landscape of Kyoto_www.city.kyoto.lg.jp/tokei/cmsfilies/contents/1shou.pdf))

The landscape of Kyoto is composed of several components which have developed under the influence of various factors. First of all, the profile of Kyoto will be presented:

- Geography
- Topography
- Climate
- The history piles up
- Change brought by time
- Industries
- Livelihood
- Tradition and culture
- Architectures
- Streets

The landscape of Kyoto is formed over in the course of the long history under the influence of the seasonal cycle.
The landscape of Kyoto was formed over a long period of time under the influence of people's way of living and natural environment

3.2 COMPONENTS OF REGIONAL LANDSCAPE OF KYOTO

(1) MOUNTAINS ON THREE SIDES OF THE CITY AND THE FOOTHILLS
(2) RESIDENTIAL AREAS BORDERING MOUNTAINOUS AREA,
(3) HISTORICAL URBAN AREA,
(4) SOUTHERN REGION
(5) WESTERN REGION AND
(6) EASTERN REGION.

Figure 3.2.1. A VIEW OF THE CITY FROM JR KYOTO STATION TO EAST

Figure 3.2.1. A VIEW OF THE CITY FROM JR KYOTO STATION TO WEST

Figure 3.2.1. A VIEW OF THE CITY FROM JR KYOTO STATION TO SOUTH

Figure 3.2.1. A VIEW OF THE CITY FROM JR KYOTO STATION TO NORTH

3.2.1 A MOUNTAIN ON THE THREE SIDES OF THE CITY AND THEIR FOOTHILLS

a. The urban area of Kyoto is surrounded on three sides by low and undulating mountains namely
   1. Higashiyama,
   2. Kitayama and
   3. Nishiyama mountain ranges.

b. These mountain ranges serve as the background of the landscape of urban area.

c. The foothills embrace many historical structures including shrines and temples, some of which are registered as the World Heritage sites.

d. Rich green mountains and concentration of these historical assets are typical characteristics of this area.


Higashiyama,


Kitayama and


Nishiyama mountain ranges.


Daigo area

1. HIGASHIYAMA (EASTERN MOUNTAIN RANGE)


Yamashina-Sosui Canal


Daimonji viewed from Yoshida


Philosopher's path

Figure 3.2.1HIGASHIYAMA (EASTERN MOUNTAIN RANGE)

Higashiyama mountain range

Extends between Mt. Hiei and Mt. Inari on the eastern edge of Kyoto Basin which is located very close to the old urban area. The area is also being called **"36 peaks of the east"** since olden days. People consider the area as a historically significant mountain range with many shrines and temples.

The foothills surrounding Kyoto basin is rich in greenery. Besides that, the groves of shrines and temples, trees along the access route of shrines and temples and trees of large facilities such as Keage Water Purification Plant and mountains create a voluminous green space.

- Hedges and trees in the gardens of larger houses also contribute to the rich greenery.
- The foothills surrounding Yamashina basin also consists of rich greenery which is maintained by the forestry industry. Harmonizing with the surrounding mountains and a sound of water stream, it serves as a pleasant pathway with cherry and pine trees planted along it.

2.KITAYAMA (NORTHERN MOUNTAIN RANGE)

Figure 3.2.2 KITAYAMA (NORTHERN MOUNTAIN RANGE)


Vicinity of Rokuonji Temple


A forest viewed from Kyoto International Conference Center (Takaragaike Park)


Kitayama cedars (Keihoku area)

Among the northern mountains, the part which can be viewed from the urban area has three roads: Shu-zan Trunk Road leading to Keihoku area, Kurama Trunk Road leading to Kurama Temple and Ohara Trunk Road leading to the famous sightseeing spot.

- The mountainous area covering Takagamine, Kinugasa, Rokuonji Temple (Kinkakuji Temple), and Toji-in Temple consist of clusters of forests. Also the woods in Haradani basin and the forests surrounding Sawanoike pond are conserved by forestry industryThere are many green areas in the premises of shrines and temples. In addition, gardens rich in trees in the residential area together with mountains in the background forms a rich green living environment.
- The mountainous area covering Kamigamo, Iwakura and Yase is a reservoir of abundant green forests.

3. NISHIYAMA (WESTERN MOUNTAIN RANGE)

Figure 3.2.3 NISHIYAMA (WESTERN MOUNTAIN RANGE)


Picturesque landscape in Kitasaga


The vicinity of Saihoji Temple (Kokedera Temple)


Bamboo grove in Sagano

Among the mountains located in the western part of Kyoto Basin, Mt. Atago, stands out among the neighbouring mountains, and plays a **symbolic role** in the natural landscape of the area. Meanwhile, in Saga area, low hills including Mt. Ogura which converges with Toriimoto settlement and its surrounding pastoral area characterizes the picturesque landscape of this area.

- Several temples and shrines including, Ninnaji Temple, are located on the foothills and their premises are covered with thick vegetation. Also the area around Narabigaoka Hill and Hokongoin Temple is rich in greenery which characterizes the landscape here.

4. DAIGO AREA

Figure 3.2.4DAIGO AREA

Old Nara Trunk Road

Mt. Daigo

Vicinity of Daigoji Temple

The row of mountains, including Mt. Daigo and Mt. Otowa, next to Higashiyama mountain range, and Gyojagamori Forest surround the residential area of Yamashina Ward which forms a small basin. **Sampoin Temple and Daigoji Temple on the foothill provide rich greenery and serve as an integral part of the perspective landscape of this area**. Pine trees along the Old Nara Trunk Road depict the atmosphere of old times. The greenery on the mountainous area of Hino on the south, combined with Daigoji Temple and its surrounding mountains, forms a rich natural landscape

B THE RESIDENTIAL AREAS BORDERING MOUNTAINOUS AREA

The Katsura Imperial Villa and Katsura River

Distant view of Mt. Inari

cinity of Golden Pavilion Temple

Figure 3.2 B the residential areas mountainous area

The residential stretch bordering mountainous area were developed under the land readjustment project and the housing development project even after the population of Kyoto had reached more than one million in 1931. The areas have kept growing thereafter. The houses for single families in this area are mostly of good quality. The area in not so crowded and is blessed with well-maintained greenery.

C HISTORICAL URBAN AREAS

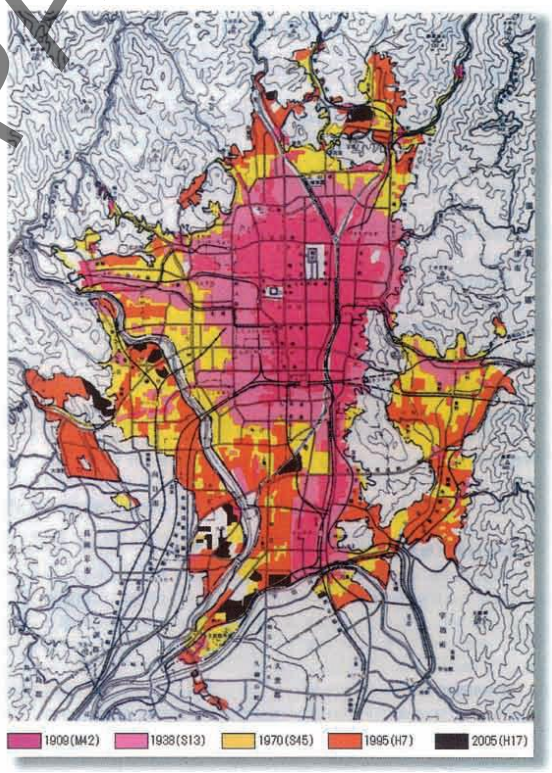

Tributary of Uji River


Fushimi-Minamihama


Kamo River

The modern urban area surrounded by Kitaoji Street, Higashioji Street, Kujo Street and Nishioji Street and the old urban area of Fushimi Ward were mostly developed between Edo Period and early Showa Era. Even today, many traditional buildings including Kyo-machiya town houses remain here forming a historical urban area.

3.3TRANSITION OF THE URBAN AREA



- The characteristics of urban landscape in each area was described in the previous pages, but when and how these areas have been **urbanized was not described**.
- The **areas urbanized until 1909 were mostly developed in the Edo Period** as downtown area and can be called the **historical urban area.** The urban development by Kyoto City before the City Planning Act was enforced in 1919 mainly focused on reinforcement of research institutes, educational and medical facilities; and on widening of major roads.
- **Most of the areas urbanized by 1938** were developed by the land readjustment project based on the City Planning Act. Kitaoji Street and Nishioji Street which are adjacent to the old urban area and other new streets connecting the trunk roads in the downtown area were constructed at the time. Along these streets, new urban development projects were implemented.
- The **area urbanized by 1970** is shown below. This area was developed under the **suburban housing development project** which was aimed at compensating the post-war housing shortage. The area urbanized by 1995 was marked by the Newtown development project in Rakusai and Mukaijima.

3.4 CONSERVATION, REVITALIZATION AND CREATION OF CITY DEVELOPMENT

In 1988, the city formulated the “Guideline for Comprehensive Design System”.

Conservation, revitalization and creation of city development

In 1991, Kyoto city set up the “Council for Kyoto City Development on Measures for Land Use and Landscape” to draw the basic guideline regarding city development and landscape in the future.

The first report focused on the “conservation, revitalization and creation” as its theme and proposed to divide Kyoto into three regions “Natural and Historical Landscape Conservation Region” in the north and three mountainous areas, “Harmonized Downtown Revitalization Regions” in the central area and “New Urban Function Concentration Region” on the south. The second report proposed some measures including sub classification of the Aesthetic Districts, promoting usage of pitched roofs, intensifying guideline on large buildings, and strengthening the regulation of outdoor advertisements. The development of natural, historical landscapes was the aim and to put them into good contemporary use.

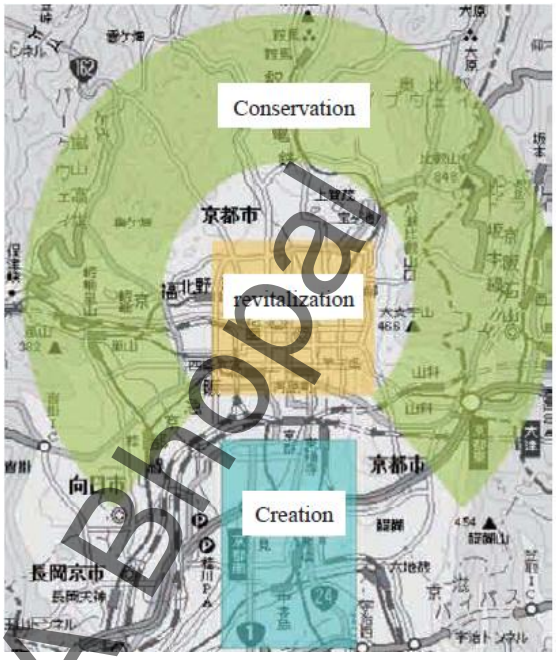


Figure 2Basic concept of land use and landscape measures suggested by the council of Kyoto City Development on Land use and Landscape Measures

3.5 PROGRESS TOWARD NEW LANDSCAPE POLICY

The New Landscape Policy has three basic concepts:

(1) Landscape should be developed keeping in view the outlook of the city in the coming 50 years and 100 years.

(2) Although buildings belong to private owners, the landscapes they form belong to public.

(3) Everyone is responsible for and has the mission to preserve the landscape of Kyoto and pass it down to the future generations.

The following five major projects: to review building height limitations to review standards for the design of buildings, and designated districts; to implement measures for the preservation of perspective and borrowed landscape, to impose stricter regulations on outdoor advertisements, to conserve and renovate historical buildings including Kyo-machiya houses

3.6 CONSERVATION, REVITALIZATION AND CREATION OF KYOTO LANDSCAPE

In order to improve the landscape of Kyoto in the future, Kyoto city drew up the Landscape Plan in December, 2005 and amended it in September, 2007 based on the Landscape Act. The plan includes the following policies.

●Creating landscape that is in harmony with the nature

Conserve the natural landscape on the basis of basin structure and develop an urban environment that is in harmony with nature by improving greenery and waterfront landscapes.

●Creating a landscape which is focused on harmony between traditional and new cultures

While conserving and revitalizing the historical landscapes, excellent landscape that suits coming era should be created by utilizing innovative ideas so as to create a new image of Kyoto that will be in harmony with the traditional landscape.

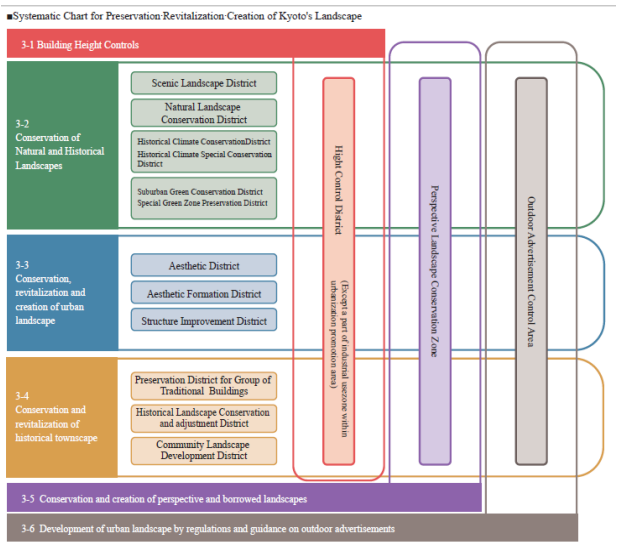
●Creating a landscape that consists of unique and diversified spaces

Create unique and diversified spaces by making the most of local characteristics developed by people's daily activities and business transactions. Connecting these spaces will make larger urban landscape which is appropriate for Kyoto.

●Creating a landscape that energizes the city

Attractive landscape will add to the value of Kyoto and will attract citizens and visitors, amass human resources and improve investment opportunities in tourism, knowledge industry and local industries. It will be the motivation power for maintaining and invigorating the energy of Kyoto.

The city should promote **the idea of "landscape being everyone's property"** and encourage citizens to be **aware of the landscape of their city**, and to share the **sense of value** in their communities.



3.7.a CONSERVATION OF NATURAL AND HISTORICAL LANDSCAPES

LANDSCAPE DEVELOPMENT UTILIZING LOCAL CHARACTERISTICS BY ZONING METHOD

1 Basic policy for the conservation of natural and historical landscapes

The natural environment of Kyoto is characterized by having **mountains on three sides and rivers that run through the city**. The basin landscape that our ancestors used to see has formed the foundation of Kyoto's present landscape. The mountain-ranges blended with important historical properties such as temples, shrines and historical sites which are mainly located on the foot of the mountains,

add rich flavour to the historical landscape there.

In order to preserve these excellent **natural and historical landscapes**, Kyoto city designed a basic policy from four points of view:

(1) preservation of historical climate,
(2) maintenance of scenic landscapes,
(3) conservation of natural landscape and
(4) Conservation of green zones.

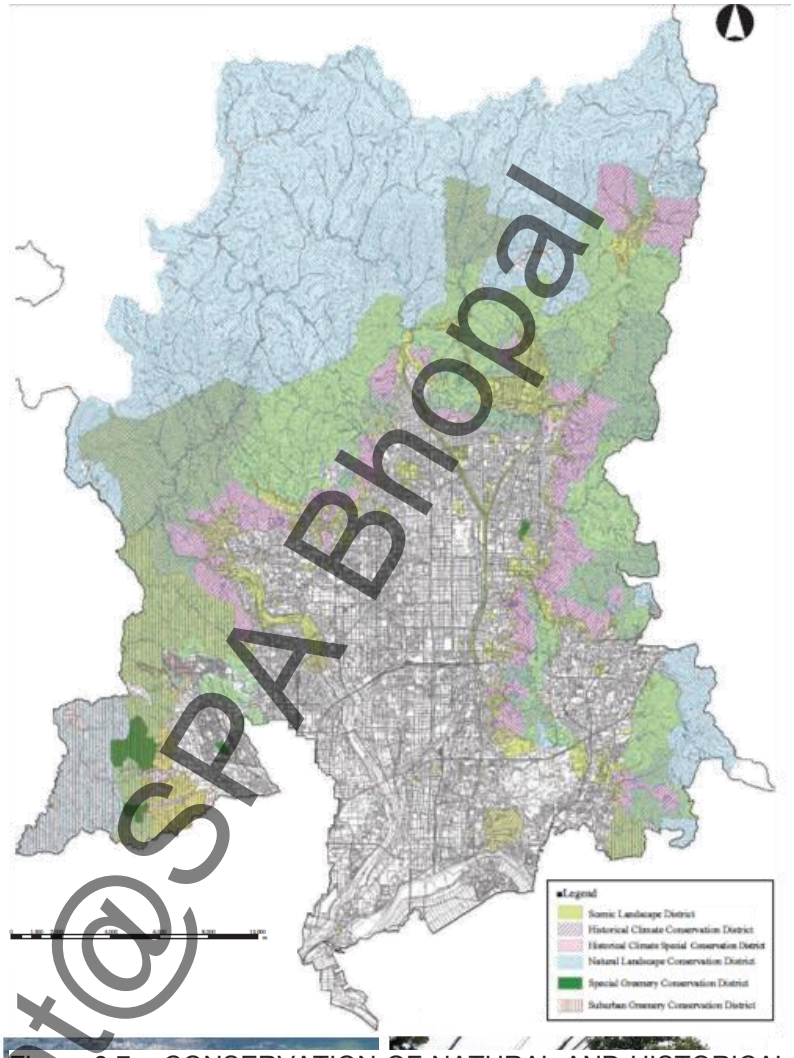


Figure 3.7 a CONSERVATION OF NATURAL AND HISTORICAL LANDSCAPES


Conservation of historical climate (Momoyama)


Maintenance of scenic landscape (Daikakuji Temple)


Conservation of green space (Yoshimine Temple)


Conservation of natural landscape (Kinugasa)

3.7b. DESIGNATIONOFSCENIC

LANDSCAPE DISTRICT

CONSERVATION OF SCENIC LANDSCAPES

The system of Scenic Landscape District was established to conserve beautiful landscapes and retain favourable living environment by maintaining the natural environment of Kyoto.

The city designated the Scenic Landscape District for the first time in 1930 to conserve the excellent natural and historical environment with rich green mountains and historical properties and the residential areas spreading across the foot of the mountains.

The basic concept of scenic beauty is defined by the Scenic Landscape Conservation Plan.

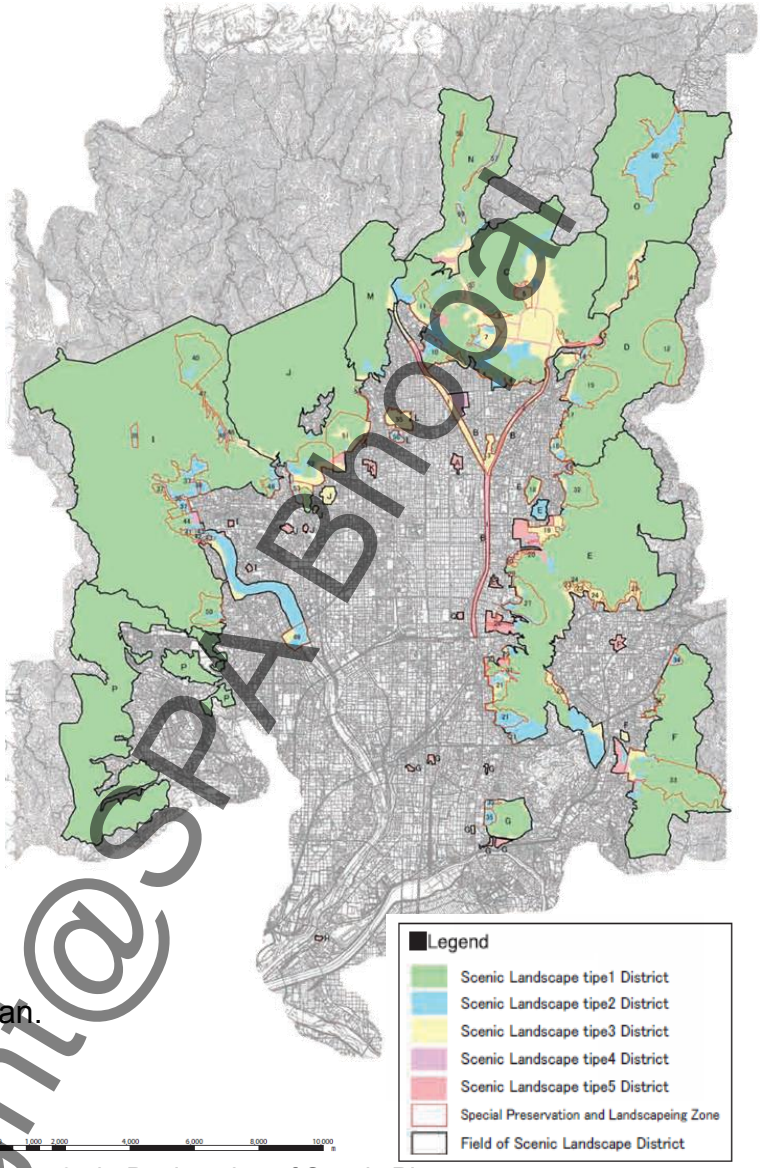


Figure 3.7b. Designation of Scenic Plan

●Types of the Scenic Landscape District and the restrictions imposed

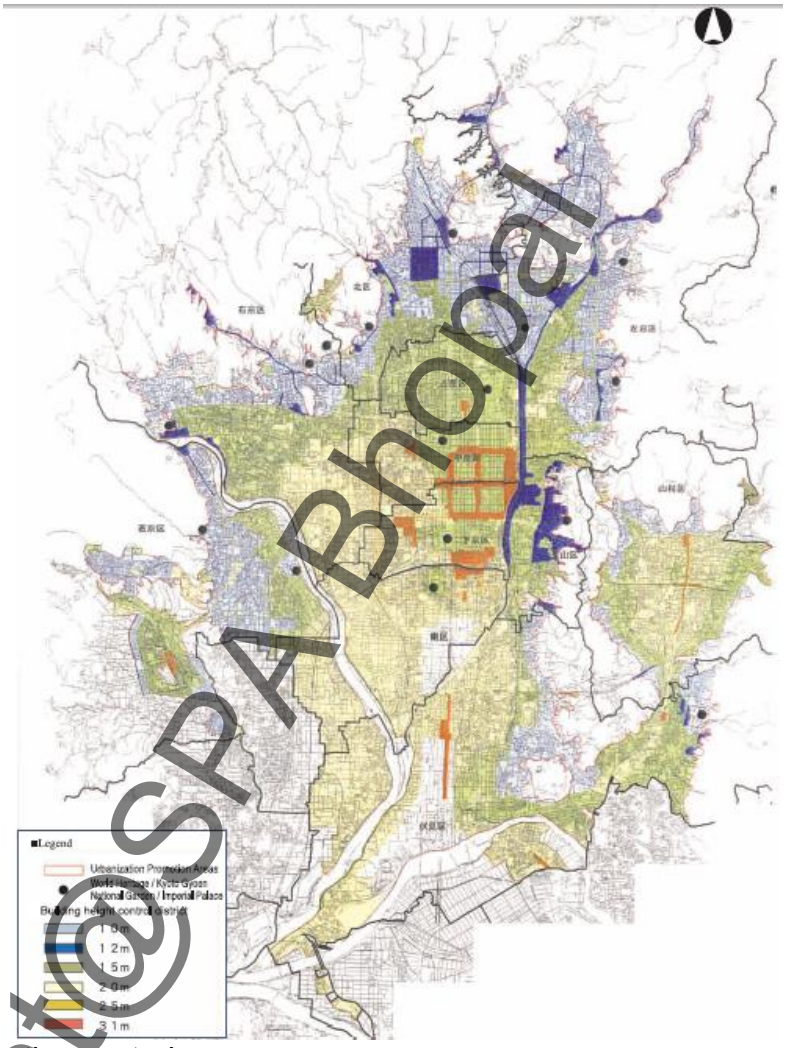
●Special Landscaping Zone

Vicinity of Nanzenji Temple, Okazaki

Togetsu-kyo Bridge, Arashiyama

Figure 3.7 b Designation of Scenic

3.7c BASIC POLICY FOR BUILDING HEIGHT CONTROLS

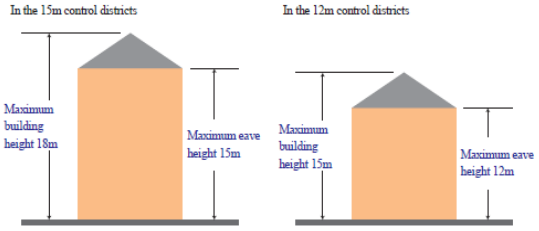


The landscape of Kyoto

Building Height Controls

Designing Urban Space Taking Advantage of Basin Structure

A city consists of various components ranging from natural topography to artificial objects such as buildings, houses and other structures. The height of buildings greatly affects the entire image of the urban landscape. Particularly, Kyoto has to consider the **relation between its buildings and the mountain ranges** surrounding it because the **urban area is located in a basin.** With this in mind, the city has formulated a basic policy on the height of building. In the central commercial and business areas, the height of buildings is set to be more than the other areas. However, in the area between the urban centre and the foothills, the height is to be decreased gradually towards the foot of the mountains



To preserve the historical monuments and rich green residential districts which are concentrated at the foot of the mountains on three sides, the building height is also controlled.

■Methods of controlling the height of building

System	Details	Aims
Height Control District	Height limitation consists of six levels: 10m, 12m, 15m, 20m, 25m and 31m depending on local characteristics of each area	To create harmony between mountainous areas on three sides and traditional houses such as Kyo-machiya, while paying attention to urban functions and land use.
Scenic Landscape District	Type1 zone: 8m and less Type 2 zone: 10m and less Type3 zone: 10m and less Type 4 zone: 12m and less Type5 zone: 15m and less	To protect the beautiful landscape and good living environment of the city by maintaining natural landscape.
Perspective Space Conservation Area	The altitudes of the buildings are decided so as to prevent them from blocking out perspective views.	To create excellent perspective landscapes and pass them down to the future generations.

3.7d CONSERVATION OF NATURAL LANDSCAPE

●To conserve natural landscape

The rich green mountain-ranges seen from the urban Kyoto, is an irreplaceable and familiar scene for the residents of this city. To pass this valuable view down to the future generations, the city enacted **"Kyoto City Ordinance on Conservation of Natural Landscape" in 1995.**

Through this ordinance the city designated most of Urbanization Control Area (approximately 25,780 hectares) as Natural Landscape Conservation District.

.●Types of Natural Landscape Conservation

District and the restrictions imposed Natural Landscape Conservation District is classified into two types depending on the degree of their importance. Areas of special importance regarding **conserving natural landscape**, located close to the **urban centre are designate.**

Type 1, located farther from the urban area is designated as

Type 2 Natural Landscape Conservation District.

In this district, the mayor's prior permission is required for any change such as construction, expansion, renovation, relocation or changing the colour of buildings and structures with the height of 10m and above.

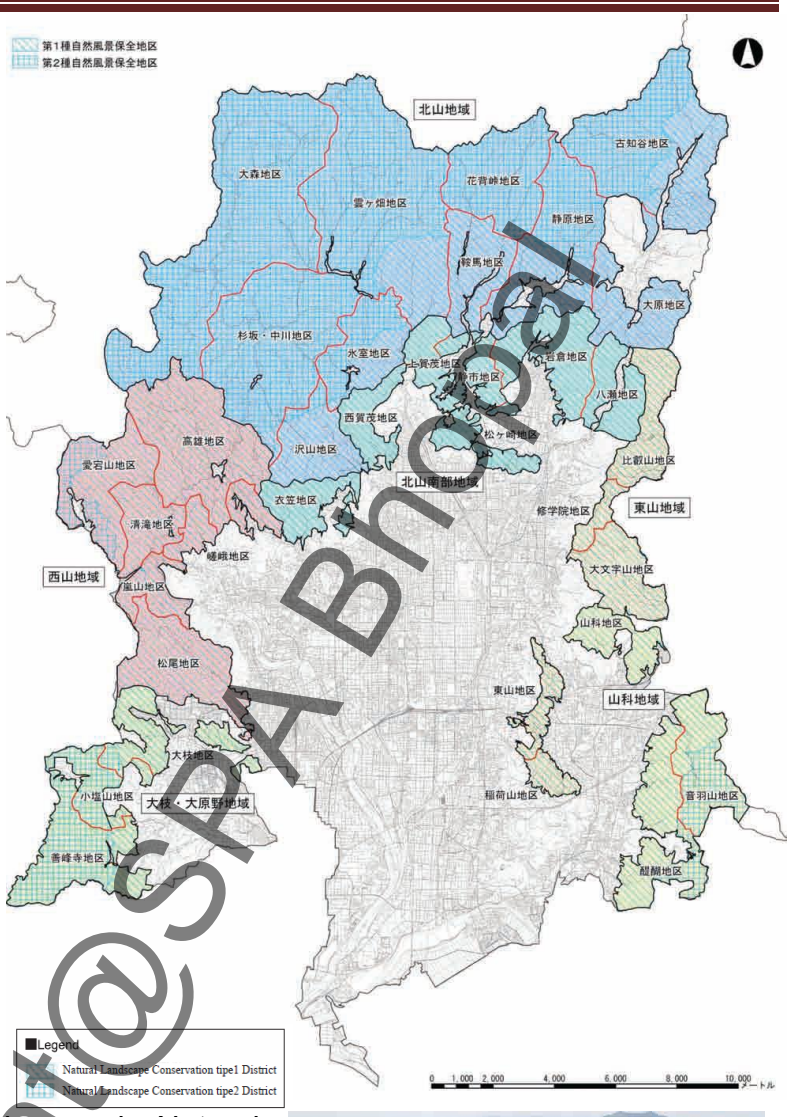


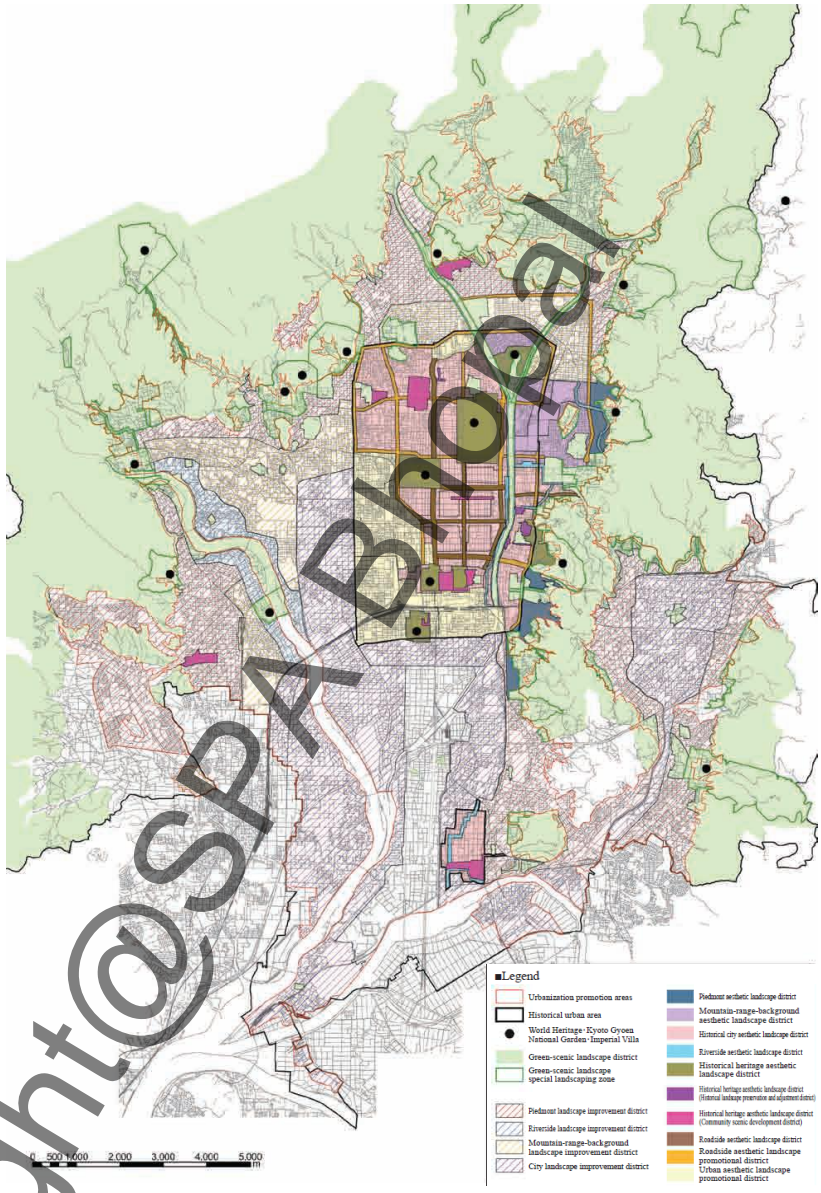
Figure 3.7d Type 1 Natural Landscape Conservation District (Kurama)

Figure 3.7d Type 2 Natural Landscape Conservation District (Yoshimine Temple area)

Kaminokyo-Kokawa area

Gionmachi-minami area

Gionnawate-Shinmonzen area



Fushimi-Minamihama

Kamigamo-go

①Hillside type

Districts where low-rise buildings are blended with rich greenery of the hillside area and form an attractive landscape.

Shishigatani

②Riverside type

Districts where buildings are blended with attractive water space, and form an elegant riverside landscape.

Kamo river

③Mountain at the background type

Districts where houses with pitched roofs are blended with mountains at the background, and form an attractive landscape.

Shimogamo

④Old town type

The historical town areas where buildings with distinctive forms and designs are developed as a result of the daily activities of residents and has created an elegant landscape.

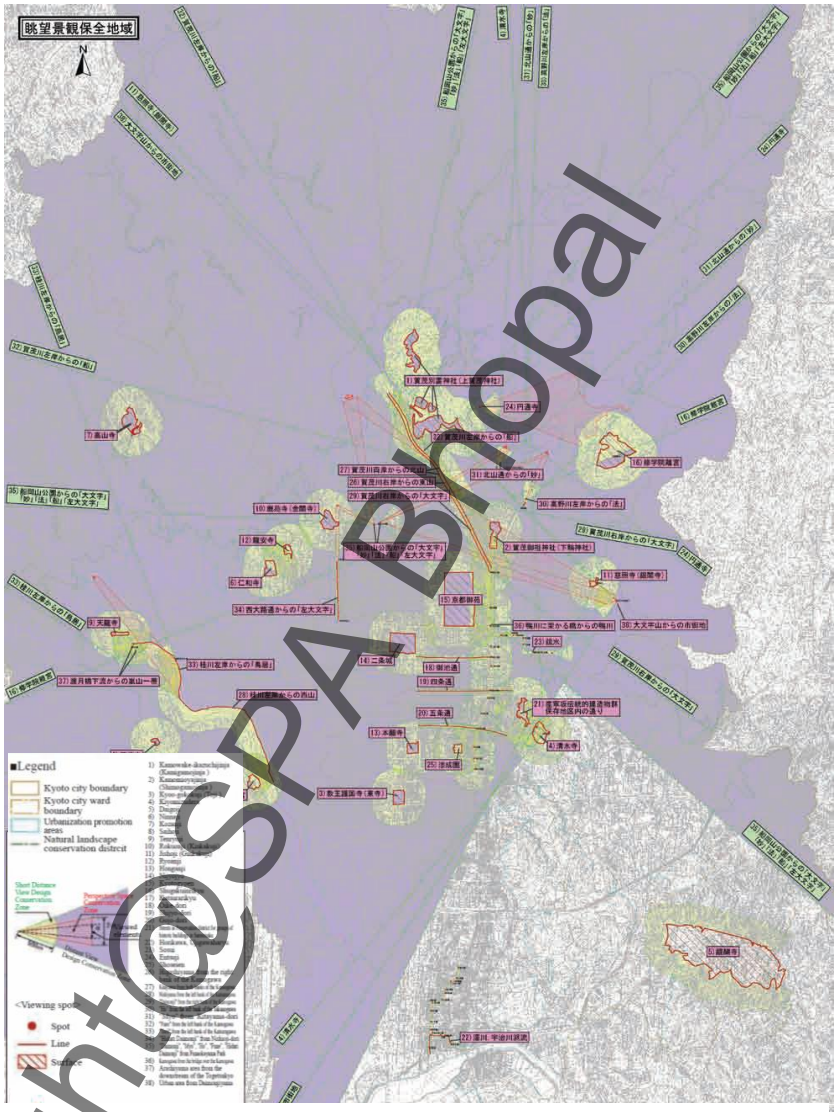
Fuyacho Street

3.7e BASIC POLICY ON THE CONSERVATION AND CREATION OF PERSPECTIVE AND BORROWED LANDSCAPES

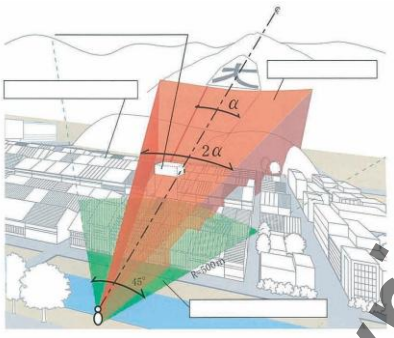
Designation of Perspective Landscape Conservation Zone

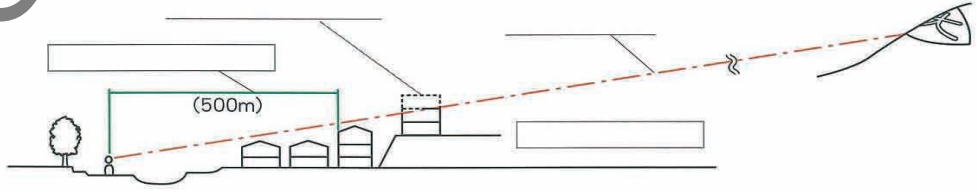
Kyoto city designates areas where perspective landscapes should be conserved and created, as the “Perspective Landscape Conservation Zone”.

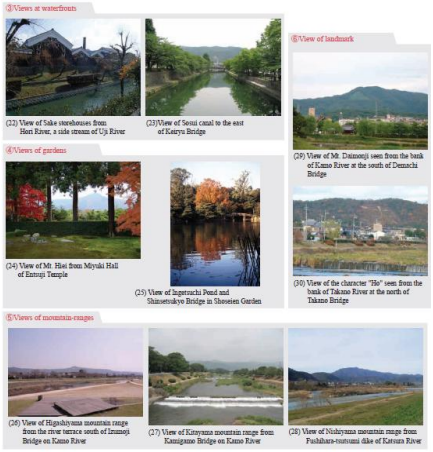
The zone is further divided into the following three categories depending on the type of regulations.



Name of zone	Regulations
Perspective Space Conservation Zone	Height of structures above sea level is controlled to avoid blocking the viewahead. the viewahead.
Short Distance View Design Conservation Zone	Standards are set for regulating the form, design and color of structures so that they do not to damage the excellent perspective landscape.
Distant View Design Conservation Zone	Standards are set for the color of exterior walls and roofs so as not to damage the excellent perspective landscape.







Measures for the conservation and creation of perspective and borrowed landscapes

Classification of perspective and borrowed landscapes

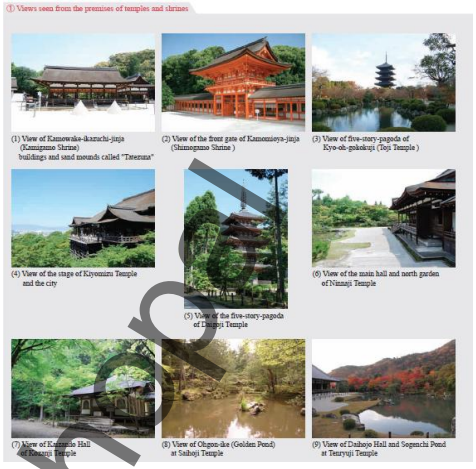
Kyoto city designated 38 areas which are in danger of losing their characteristics as “Perspective Landscape Conservation Zone” to protect the perspective and borrowed landscapes of these areas which we inherited from our ancestors. It consists of eight types according to the individual characteristics of the locality.

Views seen from the premises of temples and shrines

Kyoto is a historical city with many Shinto shrines and Buddhist temples. “Views seen from the premises of temples and shrines” are the combination of scenery of the premises with that of the landscapes in the background.

Views from streets

Mountain-ranges viewed from the streets of Kyoto are the natural landmarks of the city. “Views from the streets” are the landscape that is formed by the combination of the natural environment and historical structures along the trunk roads in Kyoto.



Views of waterfronts

There are a number of rivers and waterways of varied sizes in Kyoto. Blended with the surrounding greeneries, they create a rich and attractive panorama. “Views of waterfronts” refers to the landscape formed along these bodies of water blended with the neighbouring buildings.

Views of gardens

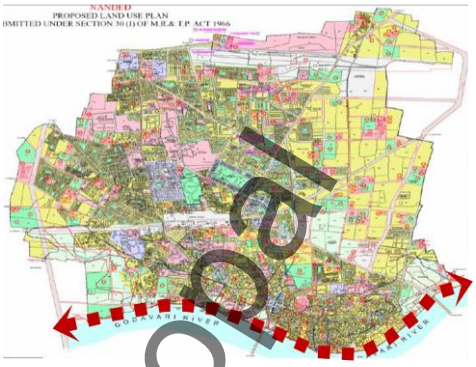
Kyoto city has a large number of excellent borrowed landscape type gardens which integrate with the distant mountains. “Views of gardens” refers to the landscape formed by the harmonious combination of gardens with the sceneries at their background.

Views of mountain ranges

River Banks such as those of Kamo and Katsura rivers’ serve as precious spots for viewing the surrounding mountain ranges. “Views of mountain ranges” includes the landscape that consists of rivers, mountains and urban areas blended with each other

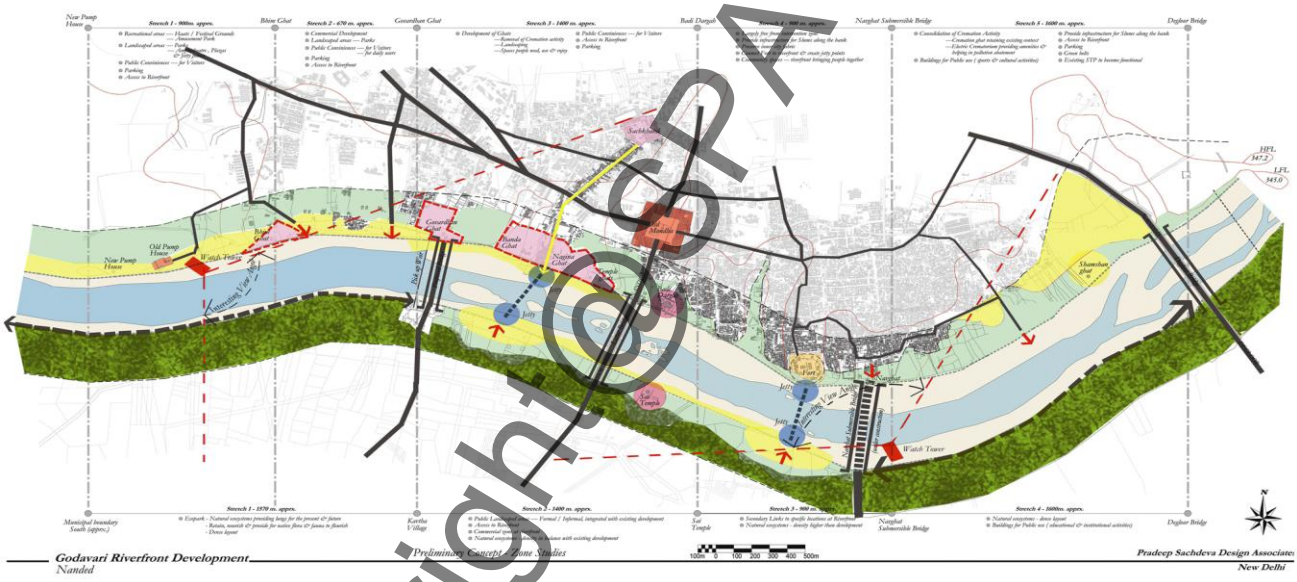
3.7.f. Interventions and Measures

3.3 GODAVARI RIVERFRONT, NANDED, MAHARAHTRA (Godavari Riverfront project, Nanded, Maharashtra)



DESIGNED ALONG THE AROUND THE TEMPLES SITUATED ON THE RIVER EDGE AND TO STUDY ITS ASSOCIATION WITH THE SOCAIL FABRIC.

The River Godavari has a very strong historic, cultural and religious significance. The origin of Nanded city is believed to have commenced on the banks of the Godavari River (as is the case in many Indian cities). The river used to be a core functional and cultural element of the city – but has been neglected over the years and is in a sad state today.



3.3.1 Present Situation:

Nanded city had its origin in ancient times. The famed Godavari River revered as the Ganga of Central India flows through the central part of the city from west to east virtually dividing the city in two parts. The historic core of the city lies on the north bank of the Godavari River. The town at present is famous for Sikh Gurudwaras and temples. The city is the second most sacred pilgrimage center for Sikhs after Amritsar also being a Centre for learning Sanskrit.

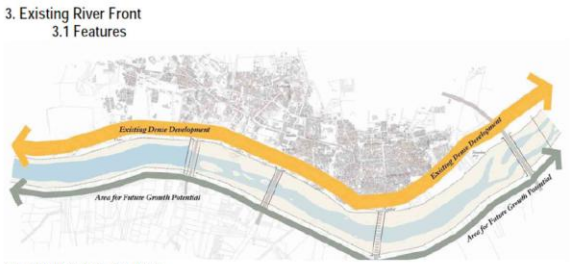
There numerous ghats like Nagina Ghat, Banda Ghat, Govardhan Ghat, Bhim Ghat, Shikar Ghat, Nav Ghat, etc. along the northern bank of the river. In the absence of conservation initiatives and legalisations regarding heritage rapid urban development is threatening the historic core. Modern construction is replacing the traditional fabric. There is loss of continuity of traditional spaces, architectural form, style and activities. As a result the historic core is slowly but steadily losing its identity.

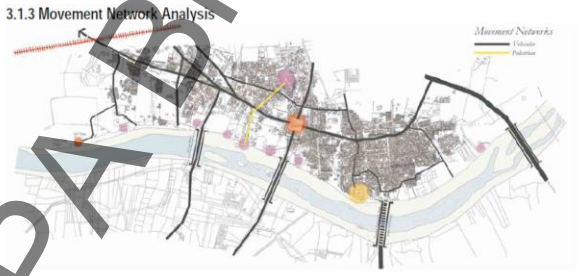
3.3.2 Godavari in Nanded:

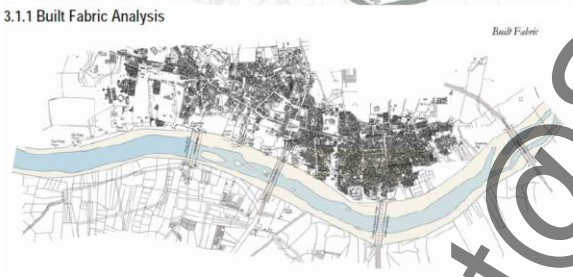
The River Godavari, referred to as the Dakshin Ganga is the largest river in south India. The river originates in Nasik/ Tryambakeshwar and meanders through a 500 km path before entering Nanded District.

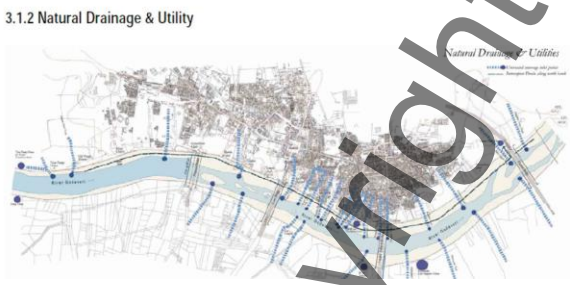
It snakes through about 150 km in Nanded District before leaving the state of Maharashtra into Andhra Pradesh. The span of the river within the city of Nanded and its immediate region has the largest trough. Nanded city has about 8 km of riverfront, as the river almost bisects the city.

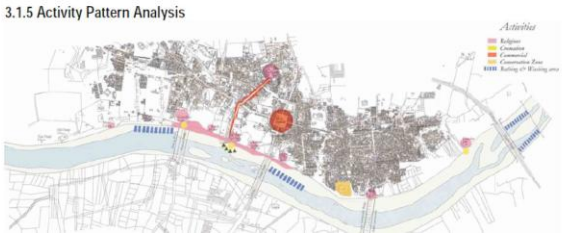
NWCMC has already initiated preparation of sectoral master plans and detailed project reports across most sectors.











3.3.a Area 1

a. The river is divided into two different levels. The **lower promenade** consist of the Ghats and a **broad walkway at the levels of the river Godavari**

b. The **landscape garden and open spaces follow the lie of the land**

c. The **old heritage temples and Gurudwaras** that pre existed on the site even prior to the **development are fit into these landscaped gardens**

d. Open spaces provide a **welcome relief to the densely populated urban fabric**

Figure 3.3.a Plan of Area 1

3.3.b Area 2

a. The provision of amphitheatre type open spaces encourages public gatherings
b. The lower promenade provides an access to the waterfront which is otherwise lacking in an undeveloped situation and it also caters to the huge number of pilgrims visiting the holy city and the Gurudwaras
c. The **natural valleys of the site have been retained** and treated in order to reduce the negative impact of over development

Figure 3.3.b. Plan of Area 2

3.3.c. Area 3

a. Parking facilities and other vehicular activities totally restricted to the upper road level

b. The stairs and ramps connect the upper and the lower level promenades at regular intervals connecting thus the road level and the river level spaces

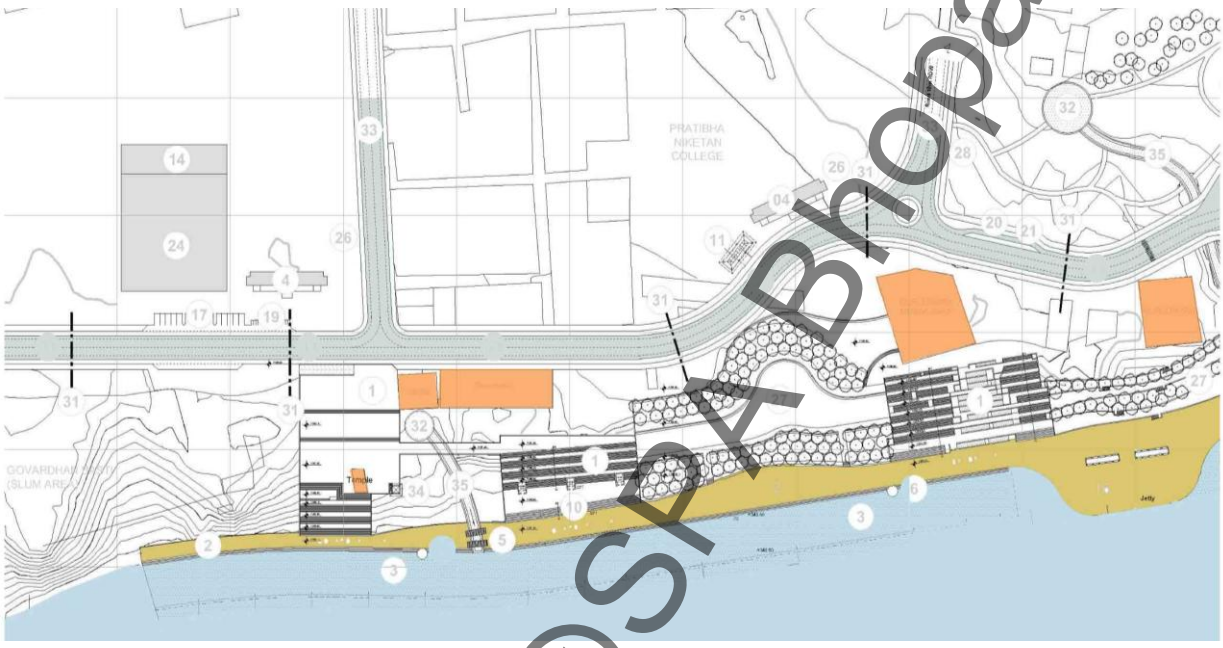


Figure 3.3.c Plan of Area 3

3.3.3 Environment

a. The river Godavari flows through the city from the west to the east dividing it into two nearly equal parts
b. The older and developed north bank has a distinct character defined by its Ghats, while the southern bank remains largely undeveloped. Some of these Ghats, to the North of the river, have religious significance due to the presence of Temples and Gurudwaras all along the water front. These Ghats are also sacred spaces used for Cremation rituals.
c. Due to no proper water front development in the city, these long stretches of riverfront lie abandoned, underused and environmentally compromised.

Figure 3.3.4 North Bank

Figure 43.3.5 South Bank

3.3.4 North Bank Key Characteristics

- Is dotted with religious structures and several Ghats. The main link from the Sachkhand
- Gurudwara opens onto the Nagina Ghat, the hub of riverside activity in Nanded
- There is an increase in density as one moves from Dankin towards Deglur Bridge.
- A steep 11 m drop leads down to the rocky banks with rocky banks with grassy patches on the fertile patches
- Several islands and rock out crops make the bed largely usable
- Much of the banks is free from construction, with farming, grazing and shrubby vegetation
- Informal activities such as dhobi ghats and playgrounds mushroom on the clearings.

3.3.5 South Bank Key Characteristics

- Newer Part of City merged with old Nanded in 1997
- Largely undeveloped, very little activity along the bank
- Land available for development

Figure 3.3.5Plan

3.3.6 INFERENCE:

1. River form the spine of development in most of the cities and one see the **land mark structures** have been built over a period of time along the river banks, **Gurudwaras in Nanded and the Temples in Varanasi**, and **most of the landmark structures have been built along the river**
2. All attempts have been made to **make the river clean and keep it clean** so that it also **adds to the ambience** which is expected from the riverfront development
3. Authorities have acquired large tracts of the land along the river beds so as to plan the desired **amenities along the riverfront**
4. **Water retention** in the river also has been one of the important strategy for the development of riverfronts. Unless the river has water retained in it is not likely to create the desired ambience
5. Development of **continuous public access** to the riverfront has been given priority in **most of the cases and hence a road network** has been planned on either banks of the river. Or at the same time the **pathways** have been **developed which are continuous all throughout the length of the river**
6. **Land uses** such as **public parks, convention centres, educational institutions** have been **planned along the river** fronts as these will **create large open and green spaces** along the river fronts. The riverfront of Moscow shows the Olympic Stadium, Universities, Kremlin , Red square all developed along the riverfront
7. In most of the cases land along the River front will attract a premium once developed and hence the river banks are also being developed as up **market residential and commercial**
8. **Public participation** in these projects is must and the concerns of Citizens in the development will have to be addressed for the development of the river fronts. Committees of eminent persons, Architects have been formed so as to guide the development along the riverfronts in Pittsburgh
9. Large numbers of projects along the riverfronts are being developed on Public-Private Partnership format (PPP).Even in case of Sabarmati riverfront Project, large tracts of lands have been offered for development of Amusement parks, residential developments, commercial developments etc. The funds from the PPP developments are being used for developing the necessary infrastructure along the riverfront
10. Development of these **commercial development** one should **consider its history** and then decide its use. E.g. – We cannot provide an **amusement park in background of Taj Mahal** as it is need for revenue generation. We should study and retain the **spirit / sense of the place.**

Reference:

(NWCMC Report For Godavari Riverfront Development)JNNURM- Reconnaissance Survey Report for River front
(Development (Preparation of DPR for Urban Renewal,)

4. SITE INTRODUCTION

4.1. LOCATION OF WAI

- 18’05 North latitude, 74’00 East longitude,
  Taluka – Wai, District – Satara, Sate – Maharashtra.
- Wai is located on the left bank of River Krishna,

  twenty-one miles north west of Satara, and Ninty miles south east of Pune.
- It is connected to Pune by a branch of Pune
- Bangalore National Highway off Surur, seven miles east of Wai and seventy-two miles south of Pune.
- The Satara Wai Road to Satara is the main
  district center connects it. (12 km from the famous Hill Station in Maharashtra i.e. Mahabaleshwar)
- Located at 700 mts above the M.S.L. it lies in the valley formed by Sahyadri ranges on the west,

  Pandavgad on the north and Vairatgad on the South side.
- Wai known as “Dakshin Kashi” for years and is one of the sacred places of Maharashtra.
- The northern bank of River Krishna that flows through
  the town from west to east is shown in the map with many temples, ghats and settlement around it for a distance of almost one and the half kilometer.

Figure 4.1 Map showing India and Maharashtra

Figure4. 1Map showing Maharashtra and Satara

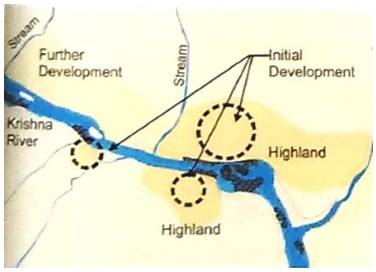


Figure 4.1 Location of Wai

4.2 Climate

4.2. a. Rainfall

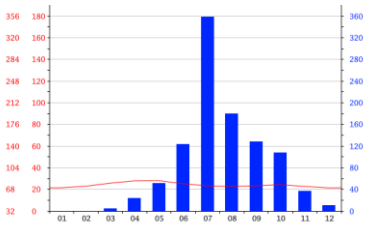


Figure 4.2.a Rainfall graph

- The least amount of rainfall occurs in January. The average in this month is 0 mm. Most precipitation falls in July, with an average of 358 mm.

4.2. b. Temperatures

- The temperatures are highest on average in
- May, at around 28.0 °C. In December, the average temperature is 21.4 °C. It is the lowest average temperature of the whole year.

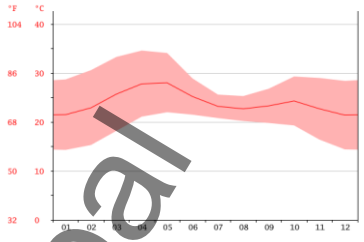


Figure 4.2.b Graph Showing Temperature

4.2. c. Humidity

- In the south-west monsoon months the air is highly humid but in the summer and the cold seasons the air is dry particularly in the afternoons. In the plains, the dryness is more marked than in the hills.

4.2. d.Winds

- Winds are strong particularly on the hills in the south-west monsoon season. In the rest of the year they are light to moderate. South-westerly or westerly winds prevail in the south-west monsoon months. In the post monsoon months, they are predominantly north-easterly or easterly, but in the afternoons northerly winds blow on some days. During the cold season, winds are from directions between north-east and south-east in the mornings and between south-west and north-west in the afternoons. Northerly or north-easterly winds are common in the mornings during the hot season, while in the afternoons winds are mainly north-westerly and sometimes westerly.

4.2.e Demographics

- According to a 2001 census in India,Wai had a population of 31,090. Males were 51% of the population; females, 49%. Literacy in Wai was 77%, (higher than India's national average of 59.5%). Male literacy was 81%; female literacy, 73%. As of 2001, 11% of Wai's population was under age 6.

4.3 STUDY AREA:

1. The Wai Region is one of its kind.
2. Area which is being developed due to its rich resource vales which is decapitating due to increasing urbanization, lack of management, migration of village people, economy, etc.
3. Wai town is situated on Pune Mahabaleshwar Road, approx 90 Kms from Pune. The Road further leads to Poladpur which is on Mumbai –Goa Highway
4. Wai thus happens to be enroute of the many accesses that lead Deccan plateau to Konkan the Sahyadri mountains route and location of Wai on the strategic importance is recognized and hence old outpost of the 17th Century.

5. In Peshwa's period the development of Wai and Menavali and Dhow took place so in present scenario it's a well known destination as pilgrimage site and resort village
6. All these years there has been significant landscape changes around this area

Figure 4.3 Map and Images shows important locations in and around the wai region

4.4Why Wai Region?

1. Wai having different natural parameters, Need to protect the resources and their human benefits
2. We can protect and enhance this natural and heritage resources by integrity them with the surrounding open spaces
3. By developing this resources area before urban development gets flourished, we can provide a healthy and developed surrounding landscape

The region comprises of Wai Town which is a temple town. Menavali village which is famous for tourist attraction because of the ghats and temple and natural scenic beauty. Dhom Village is also famous for Pandav kalin temple and Narshiha temple and in 1976 the dam was constructed.
This all is placed along the River Krishna.

4.5 Study of Layers: ((Resource Map))

4.5.1 Geology of Wai region:
From Recourse map:

- The entire site is Deccan trap
- On the hilltop laterite is found.
- Lineament is passing through lower part of the wai town.

1. The valley area has soil deposits along the riparian patch is the fertile area the soil are collected in slightly slope areas where many farmlands are observed
2. Most of area under shallow slopes with good soil depth with mostly residential and industrial purpose
3. Rocky area near to the streams.

4.5.2Geomorphology of Wai region:

1. To understand the topography the Deccan Trap is >900 m as Forts like Kamalgad and Pandavgad is constructed early for defense purposes.

2. The Deccan Trap 500-900 m where the River Krishna flows and the settlement, the agriculture land, canal and the foothill and some extent of steep slopes.

4.5.3Soil found in Wai Region:

1. Laterite
2. Black cotton

4.5.3a. Soil Character of Wai Region:

1. It consist of horizontal strata of Basalt and a flat hill top and very steep scarp on the western soil and the soil get eroded and less on the eastward.
2. Deccan trap is exposed along the river Krishna. This landscape is from the Cenozoic era, enormous lava flowed, which spread over the Central India so it is found dominantly

4.5.3.b Soil texture Analysis:

1. The trap weather with the characteristics with characteristics which gives rise to large rounded boulders on the outcrop. The traps give rise to either a deep brown to rich red soil or to regur (i.e. black cotton soil) which can be seen everywhere along the river

2. The soil in the basin are in – situ in nature and the weathered derivation of the Deccan Basalts. Extensive bleaching and weathering of black cotton soils has given rise to red loamy and lateritic soils.
3. The black cotton soil is rich in plants nutrients and gives good yield of crops. In the western parts, where the literate is extensively eroded, the reddish brown soil is prominent. They retain much water

4.5.5 Land use of Wai Region -

1. Maximum area of the site is Agricultural land with settlement as it is favourable ist a river valley region.
2. As Mahabaleshwar and Pachgani is near to site it has delineated Reserved Forest area

4.5.6 Geohydrology of Wai Region

1. The region is not favourable for Ground water potential the Lineament is passing after the municipal limit of the Wai Town.
2. It come under rain shadow region. The water table is good near the river so the agriculture practice is irrigated here and near the Foothills rain fed agriculture

4.5.4 Slope Analysis –

1. It is observed from, the overlay of slope analysis and the vegetation and structure layer shows that the wai is situated on the foothills of it and other area which has less slope has good fertile land and plantation in it
2. The steep slope has less vegetation and non fertile land
3. The land having slope from 0-5 % is the most fertile land where maximum agricultural area is located

4.5.7 KEY PLAN OF WAI REGION

1.R. Krishna
2. Important Roads
3. Dhom
4. Dam Right and Left bank canals
5. Settlement –Dhom village, Menavali and Wai town
6. Developing MIDC
7. Fort – Pandavgar, Kamalgarh

4.6 TIMELINE:

Year – **Before 900A.D**

Place Associated – Source of River Krishna
Activities – Forest Tribes
Depended on natural elements and less intervention

Year – **900 – 1396A.D Bhoj 2nd**

Place Associated – Forts and hills and the edge of the upland (Kamalgad, Pandavgad) Settlements on the forts
Activities – Forts for defense proposes
Wells for water
Chambers in forts

Year – **1396 – 1407A.D**

Place Associated – River valley source region
Activities – People started migrating from one place to another
No agriculture activities

Year – **1453 – 1664A.D**
1453 – 1480 A.D – Bahamani Kings Rule
1565 – 1664A.D - Adilshah and Nizamshah
1649 -1659A.D – Afjilkhan as Subhedar of Wai under Adilshah

Place Associated – Wai and surrounding region
Area along the source water e.g. – Kivara canal

Activities – Settlement expanded
Development on the banks of Kivara Canal
Building a fortified settlement complex for military persons and ruler defense walls were constructed
Wells for agriculture and drinking water purpose

Year – **1664 – 1769A.D**
1664A.D – Shivaji won battle against Adilshahi and the area was under Maratha Rule

Place Associated – Wai and its surroundings
on the north bank of the River Krishna
Activities – Development of political center as well as major town developed on the north bank of the river
Bridges over the canal Kivara
Agriculture practices are encouraged for stability of life

Year – **1761 – 1818A.D Maratha and Peshwe**

Place Associated – Wai, Menavali, Dhom Village and surrounding areas
Activities - Center for religious institutions (Pradnya Shala)
Construction of Maratha Architecture
Development of wai and the river Ghats with the contribution of Raste family

Year – **1818 – 1947A.D Peshwa and British Rule**

Place Associated – Wai, Menavali, Dhom Village ,Satara and Pune
Activities – Colonial development
Educational Center
Construction of Bridge across the river
Construction of Pasarni Ghat (Hilly road)
Additional temples along the river
Independence movement

Year – **1947- 2015A.D Democratic India**

Place Associated – Wai, Menavali, Dhom Village,
Mahabaleshwar,
Pachgani, Pune and Satara
Activities – Construction of Dhom Dam (1976)
Administrative boundaries
Promotion of Tourism, Industrialization
Development of Wai town and expansion
New CDP proposal
Issues of pollution in river
Haphazard Development monitored and issue considered in CDP urbanization

Figure 4.7 Regional Plan _ Mapping

4.7.1 Upland - denotes mountainous region of elevated mountainous plateau. Generally upland tends to refer to range of hills up to 500 m and above.
(Cultural Geography: Earth sciences, Physical geography)
The area was **modified by man** , and thus shows traces of manmade development since 900A.D (E.g. – Pnadavgad (as a fort), Sonjai Hill (as a sacred hill)

a. Growth –

1. It is difficult to access so it is used for defence purposes. As Gad's(fort) were built on the fortified walls on the edges of the upland(hills)
2. **Temples were built on the top** of the hill by attributing **spiritual** meaning to the natural feature
3. The path was difficult to travel as it was steep for people and animal so the start of clearing of natural forest
4. Some later where declared as reserved forest

b. Purpose –

1. The edge of the upland served as defense limit from where the large extent of lowlands can easily observed **(concept of prospect and refuge)**
2. The **fortified enclosure** acted like a small city, And had **a very strong hierarchal structure** based on the work and status
3. As a city was settled within the fortified walls the open spaces such as markets(weekly) and other activities like (social and religious) takes place. Some people stay in the fort and some are given shelter at the time of attack.

c. Aspects Contribution –

1. The character of the landscape associated with the gad's was introvert and was confined within the fortified walls in contrast with the infinite landscape outside
2. The **feature establishes a significant link with the past**. The expression is through **built form imposed on the natural landscape.**

d. Issues –

1. As to **protect and preserve the Landscape character** of this location:
2. The undergoing **transformation should be introspect** and the **movement around this part should be observed**.
3. As the **reserved forest are getting damaged,** a awareness should spread against thee development the encroachment
4. As it is the **historic site as it is a popular site, tourism activities** should have some polices to keep the **landscape character of the place intact**

4.7.2 Steep slopes - are generally defined as land with aslope angle of 20% or greater. The dominating natural feature and forms natural boundary.

a. Growth –

1. Earlier covered with thick vegetation
2. Caves were carved during the Buddhist period
3. In 17th century (Maratha Period) the Krishnamai temple and Mahadeo temple and Shree keshtra Mahabaleshwar gained a **religious importance this part was used as a medium to the access of upland, climbing steep slope from strategic location** became a significant activity for people.

2. The construction of hill road(Ghatrasta – meandering road along the steep slope) later pasarni ghat on the southern side of the river
3. Some parts where declare as reserved forest

b. Purpose

1. Hills slope support the natural processes (natural weathering brings soil to the valley)
2. Slope are **composed of basalt** (Deccan Trap), providing **natural protection and help controlling the microclimate**
3. The hills slopes determine the limits of development (agriculture) and separate the upland plateaus from the river plains

c. Aspects Contribution

1. **Strong natural character** - The hill slopes posed challenges for man and were finally modified to comparatively lesser extent
2. **The present cultural landscape and connect the various parts** of **the land -** The **rocky structure** gave rise to **cave architecture** and the **stone material for building temples**
3. **The cultural landscape ad impart it a sense of place** - The steep hill slopes from a backdrop as well as act as an enclosure for the river valley

d. Issues:

Development has started along the **pasarni ghat** supplementing the hill stations at mahabaleshwar

1. Construction work in nearby area
2. Wai town expanding to the **southern side of the river**
3. Some parts of the slope are **afforested with teak plantation and plants supplementing silk industries**
4. **Visual quality** is disturb due to signage

4.7.3 LAND BETWEEN THE BOTTOM OF THE STEEP HILLSLOPE AND THE EDGE OF THE RIVER

- This is a **dominating manmade feature**; **a vast agricultural/rural landscape in the River Valley** and **signifies a characteristic element of cultural landscape** evolved through ages
- The feature also demonstrates the contemporary scenario with **irrigation canals, changed agricultural pattern, and urbanization and riverfront development**

Based upon the agricultural pattern, this area can be separated into two areas, viz.

a. Growth

- LAND BETWEEN THE BOTTOM OF THE STEEP HILLSLOPE AND THE EDGE OF THE CANAL
- LAND BETWEEN THE EDGE OF THE CANAL AND THE EDGE OF THE RIVER

1. LAND BETWEEN THE BOTTOM OF THE STEEP HILLSLOPE AND THE EDGE OF THE CANAL

- Predominantly a **manmade landscape of agrarian character giving identity to the cultural landscape**
- The **patterns of agriculture** developed depending upon the **availability of water through rains or through dug wells**
- The **cropping pattern** consisted of dry farming of crops such as Groundnut, Bajra, Jowar, etc.
- The **edging of the steep slopes formed the natural boundary** for agriculture
- Small agriculture based settlements, locally known as 'Wadees' developed

2. LAND BETWEEN THE EDGE OF THE CANAL AND THE EDGE OF THE RIVER

- **Deforestation** for practicing agriculture
- The **pattern of agriculture** developed depending upon the **availability of water through the River** and the **topography and the soil.**
- The **historic farmhouses with gardens** influenced by Mughal landscape tradition were developed (**Motibag, north of Wai), during Peshwa Period (18th C)**
- The land is predominantly agricultural except the rocky infertile patches
- Availability of water through canals and perennial wells flourished sugarcane cultivation and other cash crops such as turmeric and vegetables.

b. Aspects Contribution –

Rural agricultural landscape character with vegetation along the valley lines and a characteristic gently sloping fertile land with grid pattern

Visually forms a vast terrain with **agricultural landscape**

c. Issues

1. Threat due **to haphazard development** due to **migration needs** – change of Landuse from agricultural to other such as residential.
2. **Excessive use of fertilizers** will affect the fertility and the structure of the soil adversely in the long run.
3. The **agricultural lands are further extending towards the hill slopes**, which will **damage the natural character**..
4. As the **present agriculture does not depend on the River directly**, the utilitarian purpose is diminishing leading to neglect by farmers and using it to drain the agricultural drainage without any treatment.

4.7.4 River –

The feature consists of the following components

- River water
- River – sacredness
- River associated built and open spaces and their use (past and present)
- River morphology
- River as an ecosystem
- River regulation and its impacts (past and present)
- Dhom Dam area
- Road network

Among these components, the area along the water edge of Dhom Dam is the most contemporary component contributing to the cultural landscape.

a. Aspects contribution

1. **Dam** as a result of **cultural development and change**
2. Visual recreational value attracting people
3. Storage of water creating a long and permanent water edge – as a new ecosystem as a result of modification of nature by man. Eg. – Ghat
4. A visual backdrop of Hill to the River.

b. Issues

1. One more dam upstream is being constructed on the River
2. The watershed area **deforested and is leading to the erosion of slopes**
3. Increase in recreational tourism
4. Haphazard and uncontrolled commercial development and the unrestricted access to the stored water in future may cause pollution of water and **may disturb the visual and ecological quality of the existing landscape**
5. Siltation of reservoir, reducing its storage capacity may happen over the years due to erosion of deforested and overgrazed slopes.

4.7.5 Riparian Towns and Villages

Dhom

1. Dhom Village and the Agriculture pattern
2. One of the earliest settlement with temple as the focus
3. Most sensitive area as it is now suituated,at the foot of Dhom dam wall
4. The canals form the additional physical linear boundary between the river and the hill slopes
5. Change In Landscape pattern – Dam (constructed in 1976)
6. Canal network – man made boundaries
7. **Change in character** – when man made elements imposed on natural landscape

Menavali :

1. The riverfront as the space for cultural activities
2. The relation between the natural and man made environment is significant as seen with the distant skyline of hills beyond, giving a sense of place
3. The area for rituals of death located downstream

Wai

1. A river facing node, a religious, historic town
2. The natural streams from the boundary for the historic town on the northern bank
3. The morphology of the town (road network, placement of temples, profile of Ghats respected the natural aspects such as topography. Natural streams, valley lines, river morphology, etc.)
4. The new development on the south bank takes little care of natural parameters including the river

- **Planned neighborhoods in 18th C**
- '**Gangapuri'** and the **ghat**
- **Ves** – Gateways for **defence**
- **Ghat** – Focus of **cultural activities**
- **Road** laid in grid, Ghats respond to natural character of land and the river

FOREST

1. Use of native species will preserve the original character, visual & ecological ingredients of the landscape, also maintain the balance in the ecosystem & proper utilization of natural resources. (e.g.. soil type)
2. Protecting the forest, afforestation of degraded areas, barren lands – to restore native flora & fauna
3. Fauna – measures for migratory species
4. Tourism – Historic place fort to be maintained and opened under regulations for public access
5. Treatment of forest edge
6. Identify areas of the RF for firewood, fodder near settlements

OPEN SPACE ASSOCIATED WITH :

1. Temples : Use of these places for the Ghats / Festival social & cultural use
2. Landscape design should be proposed to enhance these area settlement : Development guidelines – for building façade
3. Retain the façade character (square, wada, courtyard)
4. Roads & pathways : Material of pathways & guidelines for future network
5. Prone to erosion : Landscape conservation technique
6. No development in sensitive zones
7. Should be designed with respect to the landform and nature parameters. E.g. native vegetation

AGRICULTURAL FIELDS:

1. Traditional agricultural practices should ne continued
2. Protection of existing water system. E.g. wells
3. Edge conditions of the agriculture, canal edge, road edge, river edge, etc
4. Vernacular architecture should be encouraged
5. Scenic quality of open agricultural landscape
6. Soil fertility, water quality check should be done and landscape conservation techniques should be provided.
7. Waste from the industrial area should be treated and then flow in the river.

BUILT FORM

1. Ancient monuments preservation and conservation
2. The development of buildings in new towns should take place along the slopes & protecting the valley lines.

RIPARIAN ZONES

1. Water Edge - Plantation should be retain
2. No soil fertilizers should be used as it damage the water quality of the river
3. Conservation of catchment areas

SACRED GRROVES :

1. Delineate the settlement areas, religious areas for protection of eco system

ROAD NETWORK

1. Roads should be designed along the slope to reduce percentage of cut and fill.

MAN MADE EDGE (e.g. CANAL):

1. Preservation & maintenance of historic ghats & structures along water
2. Delineating a buffer zone along major waterbodies & inducing native vegetation in the area.

SEWAGE AND GARBAGE IN URBAN DEVELOPMENT AREA :

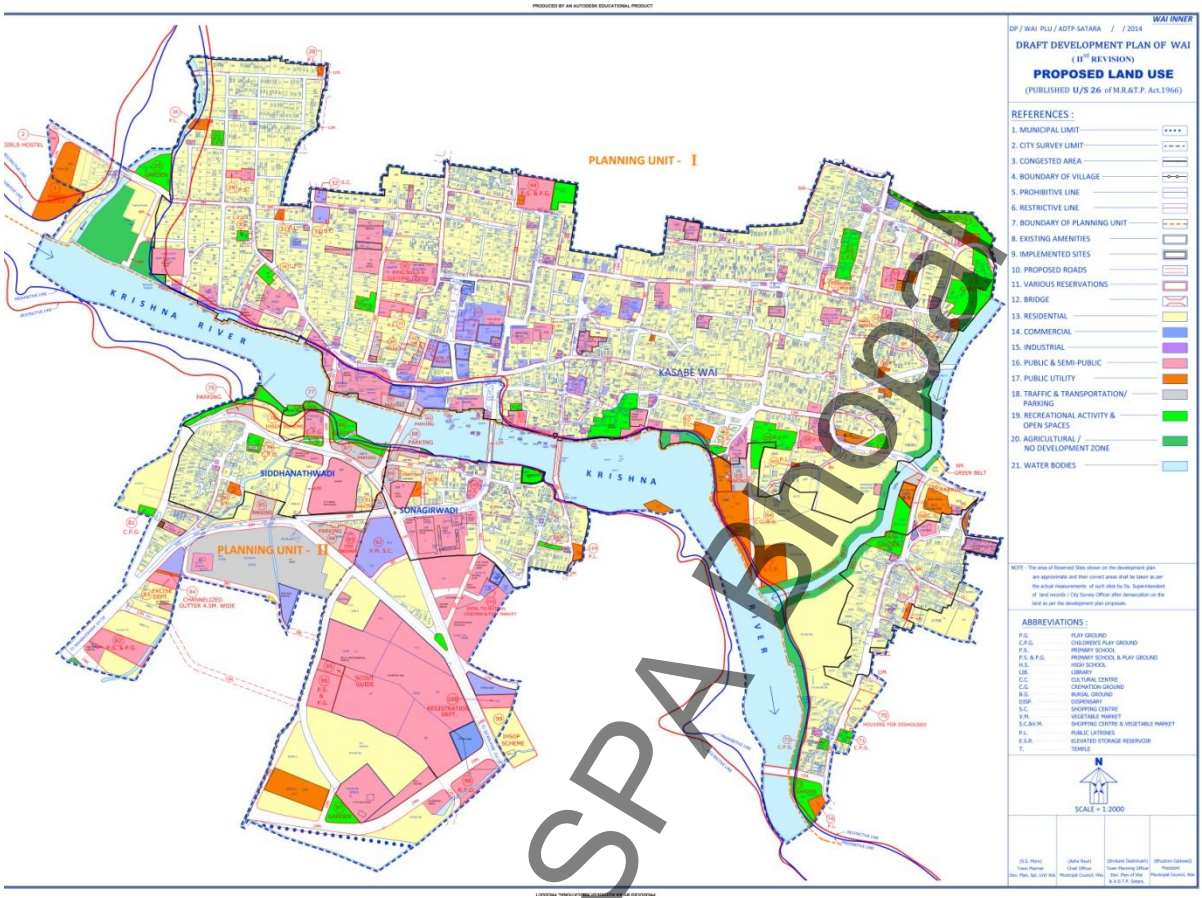
1. Sewage to be treated at settlement level before it is channel into the river

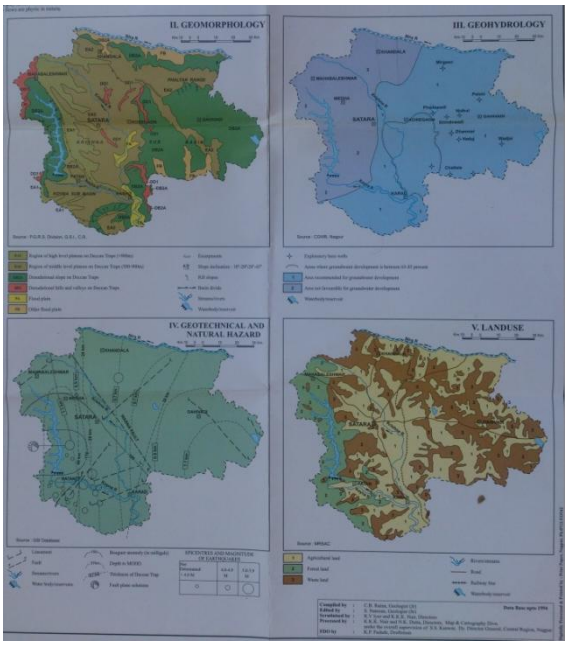
Garbage segregation should be done at point source.

2. Wet garbage (vermiculture pits, etc) & dry garbage to be segregated for recyclable & non-recyclable waste. Only the non-recyclable waste to be dumped in designated sites.

ANNEXURE

1. CDP OF WAI TOWN 1985
2. EXISTING PLAN OF WAI TOWN 2013





1. PROPOSED CDP 2014
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