

Planning for Sustainable Urban Developments: The Historic Towns of Karnataka, India

Monica Kashkari, & Tejwant Singh Brar

School of Art and Architecture, Sushant University, Gurgaon, India

monicakashkari@gmail.com; brartejwant@yahoo.com

Abstract

Policy planning for urban development is a daunting task in a fast-emerging economy like India, as the settlements are urbanizing very fast. Keeping pace with developments in such emerging economies is marred with several local issues, and the task gets complicated if the town has historical roots and cultural significance. Not much research is available to understand how the built forms of these towns are being led towards a sustainable future. Hence, there is a need to appraise the planning policies for sustainable urban developments in the historic towns.

This study examines this issue to find answers to the following research questions: Since independence, what are the policy aspects of urban developments at the central and state levels? How has the scenario changed? What impacts do the urban development policies have at the local level, especially if the towns have historic layers? Do the current urban development policies contribute to sustainable urban development?

The research employs case studies as a research methodology. It examines the regulatory frameworks, policies and programs in the context of sustainable urban developments of historic towns by looking specifically at the historic towns at Karnataka in India. Data is collected from secondary sources, primarily the master plans, zoning regulations, building bye-laws at the local level and state and central policies and programs. Along with that, semi structured interviews were conducted with primary site surveys to gather contextual references.

The paper concludes by setting out general policy guidelines for a more comprehensive and systematic approach to planning and regulating the historic towns.

Keywords: Sustainable developments, urban forms, urban development policies, historic towns, Karnataka.

Introduction

In a country boasting of one of the oldest global civilizations, it is natural that there could be various settlements that may have emerged long back and would have had a definite history attached to their evolution. In such cases, whether the urban development policies at the center and the state levels have given due importance to sustainable development in the historic towns needs to be looked at. Simultaneously, there is a question whether cohesive or supportive, regulations have been made at the local level for equitable development as these towns have transformed.

Interestingly, 'urban processes' is a new topic of discussion in India (Mehta, 1989). Until recently, the elements of balanced regional development, industrial development and housing have been the concern of the policymakers in India after independence. The reason could be

rebuilding the economy and bringing in self-sufficiency. Still, the primary causes could be the onslaught of migrants from newly created Pakistan after the partition and the need for their rehabilitation and providing them with housing. However, in recent times, there is a growing body of work done in the academia on built form, spatial patterns and urban economics rather than regional planning.

For example, recent research by the National Institute of urban affairs on sustainable urban forms has looked at urban sustainability from the urban form elements (NIUA, 2011). However, this is incomplete in terms of its approach from the point of view of historic settlements. It did not lead to any policy interventions or advisory by the central government, and only certain recommendations were drawn and listed as the conclusion. Thus, there is a need to understand and explore the policies aimed at sustainable urban developments in historic towns. In this context, this study aims to understand and find answers to the following research questions:

1. Since independence, what are the policy aspects of urban development at the central and state levels in India? How has the scenario changed?
2. What impacts do the urban development policies have at the local town level, especially if the towns have historic layers?
3. Do the current urban development policies contribute to the development of sustainable urban development or not?

Literature Review

The concept of sustainable development has been in existence for the past 30-40 years. This concept came into existence in general usage following the World Commission on Environment and Development, 1987, report of the Brundtland commission. The definition of sustainable development given by this commission is "development that meets the needs of the present generation without compromising future generations to meet their own needs" (WCED,1987). The definition envisages the attainment of a balance between its three contending subsystems, which are social, economic and environmental sustainability. The Earth Summit in Rio de Janeiro in 1992 adopted the Agenda 21. This gave a global perspective about sustainable development. The Agenda 21 lays emphasis on good governance along with improving social, economic and environmental quality in urban areas (Jiboye, 2011).

Good governance is essential to achieve an equitable and sustainable growth. This further forms a part of the United Nation's Development Program (UNDP) policy documents. The Habitat Agenda of sustainable human settlements development in an urbanizing world needs support by all governments who are signatories to the agenda 21. The sustainable development goals as adopted by the United Nations, contains a framework which calls to make human settlements inclusive, safe, resilient and sustainable by strengthening efforts to protect and safeguard the world's cultural and natural heritage. Sustainable design can lead to the development of sustainable communities by ensuring that infrastructural knowledge makes improvements that do not deplete natural resources or harms the built environment.

Consequently, the transition and mass adoption of renewable resources features heavily in sustainable infrastructure (Sanwal, 2015). The design emphasis for a sustainable urban development is on localization and sustainable living. The aim is to reduce individual's ecological footprint according to the principles of sustainable development in areas with a high population density (Sanwal, 2015). The criteria for what can be included in this kind of urban environment varies from place to place, given the differences in the existing infrastructure and built form, climate and availability of local resources or talents. This has been brought out in the discussions related to sustainable urbanism as sustainability concerns apply to all of "maintaining, repairing and upgrading the urban areas that sustains our quality of life"(Ritchie, 2008).

This has been further imbibed in the world's urbanization scenario as the goal 11 of sustainable development goals, and sustainable cities and communities (Framework, 2016). Under Sustainable Development Goals as the goal 11.4, it is required to protect and safeguard

the world's cultural and natural heritage. The targets aim at to make municipalities, and the citizens become aware of the self-created impact on cultural and natural heritage and therefore the responsibility to protect it. At the same time, it also enhances the natural and cultural heritage with respect to the local values, along with regular monitoring of positive and negative impacts on heritage assets (Framework, 2016). Urban planning in India follows a master planning approach and there has been a lot of critique about this approach ranging from being static, having ineffective public participation, weak regulatory mechanisms etc. However, there is limited evidence of alternatives to this approach being followed (NIUA, 2011).

Research Methodology

This research employs several research methods to gather data. It first carried out a documentary survey to collect information on the development policies. The plans and policies related to urban development at the national and state levels were examined, and how these translated at the local levels was noted.

A detailed review of the existing literature was undertaken to familiarize the urban development policy scenario in general and heritage-based urban development policies, in particular. The heritage town case study examines the guiding principles as policy derivatives and their impact at the local levels. Predominantly available secondary data is collected and analyzed to answer the first research question by examining public policy documents, such as Acts, projects and programs, schemes, guidelines, and previously done academic research publications.

Moreover, it conducted case studies to gather data to answer the second and third research questions. The case studies are from Karnataka, the only state to notify certain historic towns as heritage towns. While selecting the case study towns, several parameters were considered. The heterogeneity of Urban form and the complexities of the scale was kept in mind. At the same time, the relevance of the towns as a historic town was the deciding factor, hence firstly, Vijayapura was selected amongst the first list of six historic towns notified by the Government of Karnataka in 2005 and secondly Badami was selected which was notified as one of the Twelve Heritage City Developments and Augmentation Yojna (HRIDAY) towns by the Government of India.

The following techniques and tools were used in the case studies to gather data. The primary data collection was done using face to face interviews to measure the aspects of sustainability and understand the aspects of development regulations. Site surveys were conducted to measure the physical forms of the areas. Secondary data about city-specific policy and plan documents were also collected and analyzed. Understanding the concerns as well as what the town means/stands for the target groups/stakeholders in the heritage town's development needs were ascertained, when possible, by focus group discussions and interactions. Public engagement is vital to ensure adherence to regulations and implementation of policies at the local level. Qualitative data collection and analysis methods are employed, and findings and conclusions are drawn.

The research is limited to the study of two historic towns and the availability of policy documents in the public domain.

Introduction to the Case Studies

Urban form is defined as the city's physical characteristics and is generally analyzed at the scale of the urban area or its part (Kashkari,2022). In the case of a historic town, the built form is dotted with historic monuments, buildings and areas. It also encompasses the relationship, the built form has with its natural surroundings.

Since the study of urban form is primarily at a local level, the impact of various policies and programs at the local level needs to be understood. What also needs to be appraised is if any policy or program has an adverse effect or does not produce the due impact as has been envisaged.

In India, policy planning is at three levels, i.e. national, state and local. The policy scenario at all levels has been assessed. To understand the impact of policy planning on the

heritage towns of Karnataka, two (2) towns are taken up for detailed study and analysis: Vijayapura (Bijapur) and Badami. Of these, Vijayapura town was notified as one of the heritage towns notified by the state government of Karnataka in 2005. Badami is the only one under the Government of India's Flagship Heritage program.

Findings and the Discussion

The world is becoming urbanized; in 1800, only 2% of the human population lived in cities and towns; by 1900, this figure became 15% (Hannah, 2018). In 2003, as per the United Nations Human Settlements Program, people living in urban areas out-numbered those living in the rural areas. It is further projected that by 2030, about two-third of the world's population would live in urban areas (Hannah, 2018).

In India, in 1951, about 17% of the total population lived in the urban areas, but it was 31% in 2011 (Census, 2011). At the national level, the post-independence policy scenario was driven by the five-year plans prepared by the Planning Commission, whereas urban development was just one aspect, among others. Further, urban development being a state subject as per the Indian constitution, the states are empowered to prepare Urban Development Policies, but rarely has any of the states done so. To understand the relationship between the spatial plan and the policies with the heritage aspects in urban areas and how they affect sustainability in the general and sustainable urban form in particular, policies and plans are analyzed at the national, state and local levels from the post-independence times as follows.

Policies and Acts

- 1. Post-independence to 1966:** During this period, the primary concern was to house the refugees from living in unsanitary conditions; hence, housing and rehabilitation were the primary concerns (Mehta, 1989). The first five-year plan looked into these aspects in great detail. What was also crucial in the planning documents at the national level during this period was the provisioning for industrialization and the requirement of industrial housing. Since slum clearance was considered the need of the hour and propagated in the plan document, the walled city of Delhi, a link to our historical greatness, was considered a slum in the master plan for Delhi-1962. Thus, the sensitivity towards the historical references was missing.

Further, the second five-year plan emphasized regional planning and planning for industrial new towns. During this period, many states prepared state-specific town and country planning acts and established urban development authorities and other parastatals to plan and develop the urban areas. This led to Master plan preparation in many urban areas. However, the master plan approach was directly imported from the U.K. and the USA regularity practices.

During the same period, the Ancient Monuments and Archaeological Sites and Remains Act of 1958 was enacted. The prime concern here was the ancient and historical monuments and archaeological sites and the preservation of the remains of national importance, the regulation of archaeological excavations and protection of sculptures, carvings and the other objects. The focus was thus still limited to single monument-level interventions.

However, with the reorganization of the state act being passed in 1956, Karnataka came into being in its current form. The Bijapur district was one of the areas subsumed in the newly created state of Karnataka from Bombay. During the same period, the Karnataka Town and Country Planning Act 1961 and the Karnataka Municipalities Act of 1964 were enacted for the orderly development of urban areas. Karnataka Ancient and Historical Monuments and Archaeological Sites and Remains Act, 1961, also came into being. The Bijapur city, which changed hands from one state to the other, had a master plan prepared under the Bombay Town Planning Act before 1956. Its municipality had completed 50 years of operation. However, no significant development was noted during this period concerning policy and regulation.

2. From 1967 to 1984:

At the national level, urban land policy, optimum use of the land available and improving the conditions of slums were the main cornerstones of the 4th five-year plan. The 5th year plan and framework for the development of small and medium towns was developed, and emphasis was made on urban infrastructure improvement for whole towns by providing basic infrastructure amenities and facilities. A Task Force headed by Prof. Bijit Ghose was constituted in 1977 to examine the existing acts related to local governance and urban development and suggest suitable modifications and changes. The idea was to formulate guidelines and regulations for zoning, setbacks and building control, primarily for small and medium towns (Mehta, 1989).

It led to the following recommendations: (a) the formulation of a national urban policy; (b) urban land policy to ensure the proper use of land; (c) development of small and medium towns, cities and metropolises with organic linkages to their immediate areas; (d) identification of growth points in the region that may be delineated; (e) evolution of location policies in the context of regional development; (f) provision of inviolable greenbelts around settlements of specific sizes; (g) working out of rational and feasible norms and standards of urban development; and (h) creation of appropriate statutory local government agencies at various levels. In the 6th plan, efforts were made to contain the growth of the metro cities by dispersing industries and economic activities. At the state level, the local planning area under KTCP 1961 was declared for Bijapur, establishing a Town Planning Authority for the orderly development of the town.

3. From 1985 to 2004:

In 1988, the National Commission on Urbanization (NCU) was set up under the chairmanship of Charles Correa and submitted its report (CPR,2001). The commission report emphasized that urbanization was not an aberration in space but an inevitable concomitant of economic change. It recommended that 329 urban centers all over the country GEMs, i.e. Generators of Economic Momentum, i.e. urban areas identified as critical to urban growth and 49 SPURs – Special Priority Urban Regions that emphasized the region's importance as a whole in the national context. NCU report recommended adopting a spatial planning system as a link between the national and local planning and recommended a regional approach. The model recommended spatial planning through regional spatial plans at the state, inter-district and district levels. A subsequent study – "India Urban Corridors", based on the 1991 census by NATMO (National Thematic Mapping Organization), identified a set of 25 Urban Corridors at the Country level by a diagnostic and descriptive delineation (CPR,2001). In 1992-93, the 74th constitutional amendment gave permanent status to the urban local bodies and created their function domain through the schedule 12 to the constitution. That listed 18 subjects, with the 1st being "urban planning including town planning", followed by the second entry "regulation of land use and buildings", thereby mandating the local bodies to regulate all the urban functions.

The Hampi World Heritage Area Management Authority Act - 2002 was enacted to conserve Hampi's Cultural Heritage and natural environs and its surroundings and to preserve Hampi's historical and cultural identity as a World Heritage Centre and the incidental matters to ensure the same by the Karnataka government.

From 2004 till date: In 2007, the Government of India took up programs and projects under Urban Development in a mission mode, i.e., JnNURM with its four sub-components. The target was improving the outcomes and implementing a reform agenda for improving municipal governance and financial health of the urban local bodies so that they may discharge their functions more effectively. The resource planning for programs like Jawar Nehru National Urban Renewal Mission (JnNURM), Atal Mission for Rejuvenation and Urban Transformation (AMRUT), etc., ensured better infrastructure in ULBs. An aspect of competitiveness was

brought out amongst the ULBs to get selected for the Smart City Mission; Swatch Survekshan emphasized the zeal to outshine the other cities. With this, service delivery was highlighted at the local level. This is true for the various programs being taken up at the ULB Level, such as:

Swatch Bharat Mission (Urban)
Pradhan Mantri Awas Yojana (Urban)
Deendayal Antodaya Yojana
Atal Mission for Rejuvenation and Urban Transformation
Smart City Mission
Heritage City Development and Augmentation Yojana

The ease of living and the quality of life were the two main objectives of these programs; however, there was also a focused output, i.e. for one hundred smart cities. It was to have new paradigms of urban governance that came out firmly based on the program guidelines. For the five hundred, the improvement in basic infrastructure was an important takeaway in the scheme guidelines. The Heritage City Development and Augmentation Yojana (HRIDAY) were taken up for twelve (12) heritage towns of India to undertake strategic and planned developments of heritage cities. Badami in Karnataka was one of the towns under the HRIDAY Scheme. The aim was to improve the quality of life with a specific focus on sanitation, tourism, heritage revitalization, livelihoods, and retaining the city's cultural identity. The program has since closed, and no new projects and towns have been added to it.

The main projects taken up under this program apart from the preparation of the City Heritage Resource plan are (a) Rejuvenation of water bodies; (b) adaptive reuse of heritage buildings; (c) redevelopment of approach roads; (d) Urban infrastructure improvements; (e) Façade restoration, and (f) restoration of historic urban spaces. To integrate urban heritage aspects into a more comprehensive framework of city planning and development, indicating special area zones like heritage and conservation areas etc., the Urban and Regional Development Plans Formulation and Implementation (URDPFI) guidelines 2015 make significantly more specific mention of the same as follows:

- Plan for renewal and redevelopment areas or recommendation for the further detailing of Urban Redevelopment Plan for the earmarked area.
- Provisions for heritage and conservation areas.
- Regulations for the Hazard zone and protected areas.

The Karnataka Town and Country Planning Act, 1961, was amended in 2005. It specified, among other things the definitions of heritage buildings, heritage precincts, and the requirement of indicating both in the master plan and regulations for conserving the same. At the same time, the Government of Karnataka notified six (6) settlements as heritage towns, namely Bidar, Bijapur, Gulbarga, Srirangapatnam, Mysore and Kittur. Some focused efforts in terms of budgetary provisions and planning efforts were made. Some investments in terms of infrastructure improvements were also taken up.

It is noted through the review of policies and plans that primarily in the urbanizing trajectory that India is undergoing, the pressure is to provide the basic services for the increasing urban population. Thus, the development policies and plans at the state and central level often only catered to infrastructure upgrades. The modernistic ideas of these policies failed to provide much needed local context as they were planned on one size fit all basis; which meant providing infrastructure improvements depending on the size of the settlements. Hence, the pressure is on the local development policy derivatives to cater to providing critical infrastructure facilities delivery for the increasing population. In this process, the historic core city areas are ignored from the integrated citywide development and infrastructure service delivery. Even with specific programs on heritage and cultural development, a piecemeal approach for infrastructure upgrading is noted without integrating these with the city-wide development plan and policy without statutory backing. Thus, in the long run, these programs have not contributed to the systematic, all-inclusive sustainable development of the entire city.

The Case Studies

1. Vijayapura

City profile: Vijayapura was previously known as Bijapur in the northern part of Karnataka, home to various illustrious dynasties through centuries of its existence. Vijayapura Urban Development Authority planned a Master Plan 2031, which defines the Vijayapura local planning area comprised of an area of 793 sq. Km (VUDA, 2009). Vijayapura has a double-walled enclosure and an exhaustive water supply system (Sathyan,1966). As per the 2011 Census, Vijayapura has a population of 11.98 lakhs.

Heritage sites: The town is abundantly scattered with heritage assets, primarily falling into religious structures, tombs, palaces, fortifications, and water structures. The Archeological Survey of India protects about 75 heritage structures and 110 other unprotected monuments. Prohibited area, i.e. 100 m around the protected monument and the regulated area, i.e. 200 m around the protected site after the 100 m line of protection encompasses the boundaries around the protected heritage sites and the monuments as per the ancient monuments and archaeological sites and remains act 1959. This means about 6.78 sq. km area inside the fortification whereas the total area of the walled city is 7.16 sq. km and 17.93 sq km outside the fortification. In contrast, the area outside the walled city is 72.32 Sq.Km. (KUIDFC, 2013).

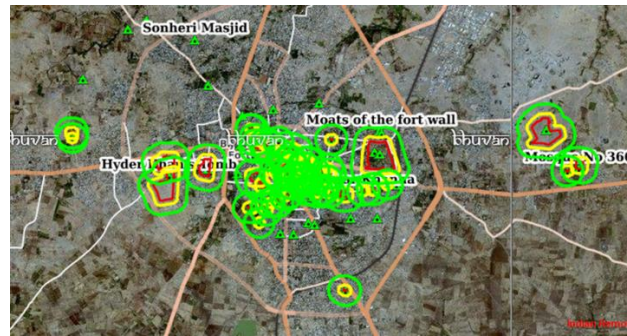
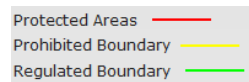


Fig.1: Area available for development

Source: Bhuvan Portal



Thus, the area available to take up developments inside the walled city is relatively minimal. At the same time, if the heritage value of all the unprotected heritage structures is assessed, then the availability of land for development will still be very small (Fig.1). Although several studies have been undertaken for the town, however, a detailed listing of heritage structures based on their intrinsic values is missing; because of this, the overall cultural and heritage significance is not receiving its due in the city.

Analysis of the Local Policies and the Master Plan

Vijayapura had a municipal administration way back in 1884; the historic town had fallen into disrepair due to years of negligence and thus rehabilitation and rebuilding were the first tasks of the Municipality, followed by providing essential services and resource mobilization. The First Master Plan for Vijayapura was prepared in the year 1951 by the Town Planning and Valuation Department of the erstwhile Government of Mumbai before the states were reorganized and the Vijayapura, then known as Bijapur, was part of the Mumbai state. Subsequently, the Local Planning area under the Karnataka town and country planning was declared in 1976. The Master

plan was prepared for an area of 203 sq. km., which was revised for the first time in 2006. For the second time, the master plan was provisionally prepared and approved in 2019. The most striking deletion in the master plan's land use details is the reference to the presence of about 75 protected historical monuments in the city limits. The reference to historical monuments like Gol Gumbaz, Ibrahim Rouza and other such heritage structures is due to the significant area under gardens and parks in these heritage monument complexes. The zonal regulations provide unique control areas, but reference to these unique control areas is not reflected and mentioned in the land use plan. Further, it is mentioned that these unique control areas are around the ancient monuments and structures under state or central government protection, but the same does neither reflect on the land use plan nor the master plan lists out the monuments under state protection.

Further Zoning regulations mentions that if any specific regulations are prepared for such zones by the archaeology department, then those will come into play. However, no specific regulations were found to be applied to the protected and regulated area of these monuments. Some regulations under the Zoning Regulation mention permitting re-roofing and re-plastering, subject to a No Objection Certificate (NOC) from the Archeology Department concerned for the development purposes but on ground, the procedure for obtaining it is tedious. Physically, the difficulty in application of these regulations on the ground, shows buildings falling to disuse, being unsafe and losing out on its contextual character.

On the other hand, numerous projects have been taken up for improving physical infrastructure in the towns under the central schemes and programs like Urban Infrastructure Development for Small and Medium Towns (UIDSMT) and Atal Mission for Rejuvenation and Urban Transformation (AMRUT), state scheme Nagarothana and even under externally aided projects for the improvement of basic urban infrastructure. However, due to restrictions for developments in these areas, the projects saw numerous hurdles including delays, changes in designs, dropping of components, unfinished projects etc. Under these circumstances, the outcome of the objective of improvement in the quality of life of this heritage urban settlement by undertaking such infrastructure improvement projects does not get fulfilled. The improvement in quality-of-life parameters will then not get reflected in the built form of the town. The world-class heritage assets will then be accessed through unmanageable and cluttered streets, and the surrounding built fabric without restoration and adaptive reuse will fall into dilapidation. An ad-hoc heritage committee is proposed under the Zoning regulations without a proper structure and competencies, which is tasked with taking decisions about the projects being taken up in the vicinity of the heritage assets.

The heritage regulations for protected areas and regulated areas will have to flow into overall regulation for the town. The areas for proposed urban development beyond regulated boundaries also will need design guidelines, choice of materials, height restrictions, setbacks, design guidelines such as door & windows type/ sizes/ sill & lintel levels, etc. façade treatments, construction techniques, etc. to maintain the skyline of the Citadel and the important heritage assets.

Further, without a comprehensive regulation to guide, lack of professional competencies and subject expertise in the heritage committee, a comprehensive view of the whole heritage town as propagated under the Heritage Urban Landscape will and cannot be achieved.

2. Badami

City profile: Badami is a small historic town in the Bagalkot district of Karnataka famous for its rock-cut cave temples dating back to the 8th century of the Chalukyan era (Sathyan, 1966). Currently, it is a town municipal council with an area of 4.23 sq. km and a population of 30943 as per the 2011 census.

Heritage sites: The topography plays a vital role in defining the structure of this heritage town. It is enclosed by a hillock on three sides and a fortification wall (now in ruins) on the fourth side. The Archeological Survey of India protects twelve (12) heritage monuments in the town. There are another eleven (11) unprotected heritage structures in Badami. The most significant and evident heritage structure, an artificial lake constructed during the Chalukayan era called Agastya Teerath, is also an unprotected heritage structure (SUI, 2013). Prohibited area, i.e., 100 m around the protected monument and the regulated area, i.e. 200 m around the protected site after the 100 m line of protection, encompasses the boundaries around the protected heritage sites and monuments as per the Ancient monuments and archaeological sites and remains act 1959. This means that the whole of the historic core comes under the undevelopable area (Fig.2).

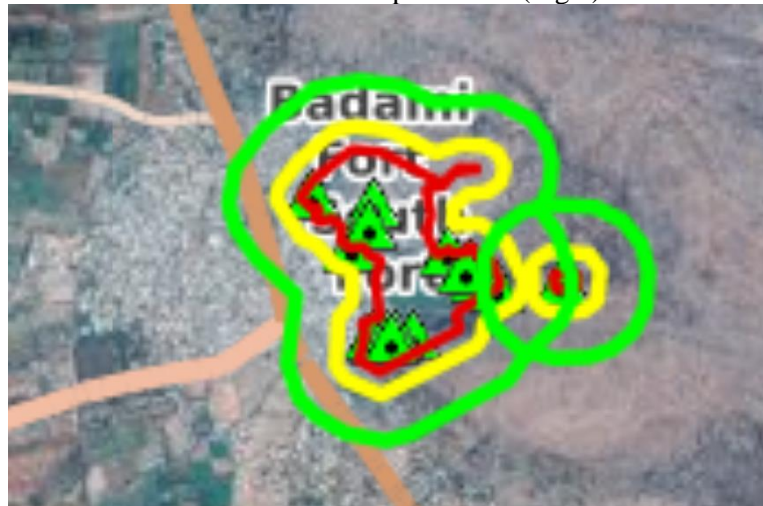


Fig. 2: Area available for development

Source: Bhuvan portal



Analysis of the Local Policies and the Master plan:

Badami became a municipality in 1995 and was brought within the ambit of the Karnataka town and country planning act in 2001, after which the first master plan was prepared and notified in 2009. The planning area comprises 521.12 acres of land (BPA,2009). The master plan report mentions the 12 protected monuments as notified by the Archeological Survey of India; however, these are not marked on the master plan. The remaining heritage assets are not mentioned in the Master Plan report at all. The zoning regulations make no effort to provide importance to the cultural and natural heritage of the town. Municipal Building bye-laws have no reference to the heritage core of the town too. Badami City Heritage Resource Plan under the Heritage City Development and Augmentation Yojana (HRIDAY) has given a vision document for the development of this town, which is without a regulatory framework and is only advisory in nature. However, under this

plan, the various sectors are evaluated for developing and improving this historic town and has proposed some projects with a total value of 667.30 million. Of this, funding was approved for 408.10 million. However, an outlay of 222.60 million is earmarked only for the projects being taken up (IHCN-F,2015). Thus, comprehensive improvements are lacking due to fiscal constraints. Under the Atal Mission for Rejuvenation and Urban Transformation (AMRUT), the prime focus is on the infrastructure improvement, and priority is given to investment in UGD for the town.

The old Historic town of Badami currently acts as its core. In terms of the built form, the Badami old town is said to be built on the plinth of the original town of Vatapi and it still retains a local vernacular character. The old town has houses/buildings built using indigenous techniques and materials. The vernacular architecture in the region is shaped by the climate, locally available building materials and the building techniques. Many houses and streets are 100-250 years old and hence of heritage value. Houses in the historic precinct are clustered around open spaces. These open spaces play a significant role both in daily lives of the residents as well as an important space for religious and social activities. The master plan identifies neither the heritage as a special layer of the town nor makes any special provision for the same. All monuments are shown as public and semi-public use.

Zoning regulations are also lacking with any special provision on the heritage area. On the other hand, with the development being restricted due to being in the protected zone, lack of development control regulations for the improvement of built forms of heritage and lack of incentives has led to the deteriorations of the built form. The lack of impetus to promote and conserve its built form will lead to the destruction of the Heritage urban landscape of these towns, which in turn will impede the sustainable development of this town. At least with the HRIDAY scheme of Government of India, efforts are being made to integrate the inner core areas-built fabric of historic areas and linked spaces, natural heritage into a comprehensive citywide development plan which otherwise was lacking in the Master plan.

Conclusions

With the systematic and phase-wise review of the national, state and local policies since India's independence, the graph of policy prerogatives in Urban Development has shifted from being a welfare state to that of a provider facilitator to systematic sector-wise improvements. However, the lack of a comprehensive urban development policy at the national and the state level is hindering the overall development of all urban areas, including the urban areas with the historic fabric.

These answers the first research question whether the policy aspects of urban development at the central and state level are reviewed, and changing scenario is understood. With the focus on Heritage towns under the HRIDAY Scheme, it looked like that systematic and comprehensive efforts at the policy, planning and implementation level would be taken up for heritage towns. However, with the discontinuation of this program, it again becomes one of the infrastructure improvement projects without long term policy implications or learnings being adapted in a comprehensive plan.

The city heritage resource plan prepared for Badami looked into the aspects of overall quality of life with a specific focus on sanitation, tourism, heritage revitalization, livelihoods, and retaining the city's cultural identity. Detailed mapping and listing of heritage assets were undertaken. It was taking cognizance of the unique built forms most of the towns present, and their landforms and environments reflecting the settings and the overall cultural ambience. However, the

plan prepared under this scheme lacked the regulatory framework. On the other hand, the master plan prepared under the statute and having all the regulatory mechanisms to take it forward at the local level was lacking in the aspect of heritage in general and Heritage Urban Landscape in particular.

Lack of professional competencies, subject expertise and lack of a comprehensive view of the whole heritage town was the glaring lacuna found in the master plan of Vijayapura, when even the most important monuments were found missing on the land use plans and without reference in the master plans. Thus, the impacts that the policies on urban development, like Master plan strategies and regulations, have at the local town level are detrimental to sustaining its built form. Especially if the towns have historical layers, ad-hoc planning and development will lead to dead spaces and unsustainable built mass.

As per the URDPFI guidelines of 2015, the inclusion of heritage as a special area zone in the master plan has to be mentioned in the 2015 guidelines. However, both case studies showcased the absence of it in the city's master plan, a document which singularly impacts the built form due to the zoning regulations regulating not only the land uses but also the height and density. The ad-hoc regulations, which do not reflect and take into account the local character and cultural aspects, do not reflect the historical and cultural glory of the place.

Thus, the need is to form specific heritage legislation and bylaws to protect the built typologies and the unique character. The current urban development policies at all levels do not effectively contribute to the development of sustainable urban forms without proper regulatory mechanisms and procedures. The current policy derivatives lack several aspects which are a priority in regulating the built form of the settlement, and these are as follows:

1. The built form needs to be seen along with the natural landform of a settlement. Thus, a policy planning study of the builtforms and their environs need to be done in the historic towns of Karnataka.
2. It is noted that the core of the town is also its historic core with most of its historic monuments being present in this area. As the protected and prohibited area leading to restrictions in the development, re-development and reconstruction, this area is the most threatened part of the historic town and requires detailed studies so that specific interventions can be taken up, which may include specific regulations, incentives etc.
3. Appraisal of the regulatory framework and assessment of the local mechanism at the local level (building bye-laws, zoning regulations) along with national/state level policies and programs must be seen in the context of the individual town. Thus, emphasis on the bottoms-up approach is apt in ensuring sustainable built forms. With these recommendation notes, the current research examines the policy scenario in the context of the sustainable urban form of historic towns by setting out general guidelines for a more comprehensive and systematic approach to planning and regulating historic towns.

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