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Viewscape Assessment Framework for Protecting the Views of Sacred Monuments: Comparative Study of Srirangam and Thanjavur Religious Towns

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Abstract

Sacred monuments represent layers of evolving traditional forms of architecture and city building that have together created a sense of place in our historic cities. Among the various sacred monuments Gopurams and Vimanams are significant landmark structures which form the image and identity for the historic temple towns of South India. Treating temple Gopuram and Vimanam as objects of worship inspired and influenced a variety of sacred activities and rituals performed in places around them. These sacred monuments have been built to be viewed and worshipped from far as well as near. The Gopurams, which once stood in centre of the settlement and dominated their surroundings, are now in danger of losing their visibility due to a variety of elements that obstruct the view. In the above context it is attempted to study the visual relationship between the sacred monuments and the places from where the views are available, so as to identify the most important views for protection. For this purpose, a review of literature related to assessment of quality views was undertaken. In order to protect the most important views, a 'Viewscape Assessment Framework' was used to assess the factors which affect (a) quality of views and, (b) quality of place from where the view is available The viewscape assessment framework was applied in case of two important sacred monuments with differing visual characteristics. Major findings of the study reveal that the significance of view of the sacred monument depends on viewing location, its physical characteristics, number of potential viewers, background and foreground elements of the viewscape. This study also emphasizes the use of 'View Assessment Framework' for identifying and protecting the views of sacred monuments.

Key words: Viewscape Assessment, Sacred monuments, View Preservation

THE BACKGROUND

Preservation of the character of historic towns and mitigating the impacts of new development has been a challenging task for spatial planning authorities throughout the world. In preserving the character of historic towns, protection of important views of heritage buildings and landmarks plays an important role. Most of these heritage buildings strongly contribute in forming an image for the historic town. The existence of such views, often containing well known cherished landmarks and landscapes, enriches our daily lives, attracts tourist and helps our communities prosper. "Views play an important part in shaping our appreciation and understanding of historic environment, in towns and cities

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and in the countryside. Some views are designed to be seen as a unity, more commonly, a significant view is an historical composite, the cumulative result of a long history" (LVMF 2008). However, in the Indian context, due emphasis has not been placed in preservation of the views of sacred monuments, the uncontrolled urban development around which has threatened to block the traditionally enjoyed views.

Among the sacred structures, *Gopurams* significantly contributed the image and identity of temple towns of South India. *Gopurams* are entrance gateways of temples, located in the cardinal directions in the walls encircling the temple complex (Balasubramanian, 2004) and are unique to Hindu Temple architecture of Dravidian style which flourished in Tamil Nadu. The *Gopuram,* as an object of worship, inspires and influences various sacred activities and rituals which are commonly performed in the places in its vicinity, in the shadow of the temples. Typical sacred spaces which traditionally had visual relationship with the *Gopurams* are the bathing ghats, walk paths, *pradakshina* paths, procession routes and spaces where temporary celebrations, etc. are performed (Rana Singh, 1993). In contemporary practice, the rituals and sacred activities are extended and replaced by a variety of urban functions such as playgrounds, public parks, plazas and other urban open spaces that are largely associated with leisure time activities.

Similar transformations are seen in the viewscapes of the *Gopurams*. These sacred *Gopurams* were built to be viewed and worshipped from far as well as near. The edifices, which once stood in isolation and dominated their surrounding, are now in danger of losing their visibility. They no longer have their visual relationships in the wider setting and, in many cases, are likely to be lost in the immediate setting. This problem is caused mainly by the increase in height of the surrounding development which is also not consistent with the historic structure. Protection and appreciation of views and their aesthetic values have been recorded since Greek and Roman times, where planning and design of towns were influenced by such considerations.

In the above context this study aims to understand the various issues related with conserving the views of *Gopurams* of South Indian Temples. Very specifically it assesses the quality of views and the quality of place from where the view is available. This study compares and assesses the view availability and view quality of sacred monuments from various public places in the historic temple towns. The two cases chosen for study are the *Vimanam* of the Brahadeeswara Temple of Thanjavur, and the *Rajagopuram* of the Ranganathasamy Temple at Srirangam. The outcome of the study helps in the identification of the important view which needs to be protected in these two cities.

LITERATURE REVIEW

The importance of visual assessment study in urban analysis has long been recognized. The construction of the city of Rome and early Italian hill-towns have been influenced by established lines of sight (Bacon, E.1967), and the planned development of visually prominent locations. The visual impact studies have now become part of urban design and planning process. Several cities throughout world conduct similar studies related to viewscape analysis and view protection (for example, London View Management Framework, 2010; Seattle View Protection Policy, 2001). Over the years two types of visual studies have emerged some focusing on landscape as the visual amenity and others focusing on historic buildings / landmarks.

Some of the prominent studies that focus on view protection of Townscape, Buildings, Landmarks are The Capitol View Preservation study, Austin (1983), The Ottawa Views, City of Ottawa (1993), and London View Management Framework, London (2010), whereas The Vancouver Skyline study, Vancouver (1997), Scenic Views, sites and corridors, Oregon (1991) focus on protection of views of the natural landscape surrounding the city. The study of the city of Seattle (Seattle View Protection policy, Seattle, 2001) is prominent for equal focus on both Protection of views of Buildings and Surrounding Landscape. Other studies about Cambridge urban character and viewscape assessment (Lise Bucher, 2005) (based on methodology developed by Gabriel Cherem), used Visitor Employed Photography (VEP) as a tool to collect public images of the landscape. VEP has been used to identify the consensus photographs with urban features which the public value the most, and needs to be preserved and protected.

The studies mentioned above developed methods which involve inventorying, analyzing, and developing recommendations for protection of views of landmarks / buildings and natural landscapes. The public process was also an important component to each study as it incorporated ideas from an important group of citizens. The 'London View Management Framework', which demonstrated an approach that clearly suited the needs for our purpose in classifying and mapping the views, provided the most useful information for this study. The digital images and pictures from the studies were of value as they helped to visualize the results more clearly. Overall, the studies provided with useful information that helped to guide this research towards identifying the important views and viewscape preservation. Furthermore, it was found from the literature that International Charters on World Heritage do not protect or define the important views specifically (François LeBlanc, 2008). Of all these charters and documents, only two use the word "views" in the context of views to and from historic monuments and sites.

In addition to the above studies, a review of literature on Computational Visibility Analysis shows a long history since 1960. Thiel (1961) first tried to analyse explicitly the visual properties of spatio-temporal paths through the built environment; Benedikt (1979) looked at isovist measures of visible space throughout configurations and the associated visual fields through space that they produce. Recently attempts have been extended to a 3D approach Viewshed, 3D isovist , Spatial Openess Index ((Dafna Fisher-Gewirtzman, etal 2005), Viewshphere (Perry Pei-Ju, et al 2007) are some methods developed to measure visible urban space quantitatively. The above mentioned studies have developed tools to objectively measure urban space, but architectural and urban spaces are too complex to be evaluated only by metric tools. There is need for qualitative assessment. The previous research on view protection studies in Western countries focused on issues of identifying and protecting the views of landmark structures and natural landscape, the viewing place characteristics were not emphasized in those studies in detail.

In the Indian context studies and research specifically focusing on views of historic landmarks and their preservation were not given importance. But there is a need for such research to protect the views of large number of our ancient monuments, which are constantly threatened by the surrounding urban development which obscure the traditionally enjoyed views. This study is an attempt to fill that gap by studying and comparing the views of two sacred monuments by assessing their views using an assessment frame work model.

METHODOLOGY

The method used in this study involves the following stages:

Stage 1: Selection of two sacred monuments (*Vimanam* of the Brahadeeswar Temple, Thanjavur and, *Rajagopuram* of Ranganathasamy Temple, Srirangam), which have spiritual, architectural and historic significance.

Stage 2: (a) Inventorying the available views of sacred monuments from various directions and distance; (b) Photographs taken from the Assessment View Points annotated or coloured to show the viewing orientation towards the monument in the city plan ; photographs, if relevant, to show the kinetic nature of the view (View corridors); (c) Documenting the viewing place by observing and recording its physical qualities; (d) A View Plane Map is prepared by showing the locational relationship between various view points and the viewing amenity.

Stage 3: Modified view assessment framework is developed for analyzing the views and the viewing place. It contains the following attributes for viewscape:

(a) Visibility of the monument; (b) Classification of view, based on distance; (c) Type of view; (d) Dominance in skyline; (e) Background and Foreground of the viewing plane; (f) Obstruction Type. In case of the viewing place, the attributes were: (a) Type of viewing place; (b) Place characteristics of the view point, i.e., (i)location, (ii) assessment view point, (iii)place elevation, (iv) activities, (v) landuse, (vi) general ambience, and, (g) potential viewers.

Stage 4: Representative sample of nine views and their respective viewing places were selected (three views in each classification of views based on distance), and were further analyzed for their significance.

Stage 5: Comparative analysis of views of both the sacred monuments in the study area was undertaken and their similarities and differences were observed. The following is the modified view assessment framework with relative weightage criteria for analyzing the views of sacred monuments and for identifying the important views.

i. *Visibility of the Gopuram:* High (visiblity of the structure is more than 90%, with no obstructions), Moderate (visibitiy range 70% - 90%, with few obstructions), Average (visibility range 50% -70%, with more obstructions), Poor (obstucted by permanent objects, partial visbility, visibility range less than 50%)

ii. *Classification of View:* Immediate Views (within 500m from view amenity), Intermediate Views (betweenn 500m to 1000m from view amenity) and, Distant Views (more than 1000m from view amenity)

iii. *Viewing Place:* View from paths and streets, View from public parks & open grounds, View from semi-public places, sacred places, View from water bodies, sacred tanks, rivers, etc.

iv. *Types of view:* Visual corridor, Panoramic, Serial views, Framed Views and, Street-end views

v. *Dominance in skyline:* The impact of silhoute of the monument in the skyline (High, Marginal and Low)

vi. *Obstructions types:* Buildings, Signages, Communication & Utility Lines, Vegetation, Hoardings, Temporary hatched roofs (pandal), etc. Background and Foreground of the View Plane

vii. *Place characteristics of view points*: Enclosure, Activities, Landuse, Place Elevation, General Ambience, etc.

viii. *Potential Viewers:* Locals, Pilgrims, Tourist and Non-Religious Tourist

ix. *View Significance:* Ranked among the selected views based on viewscape attributres

THE STUDY AREA

As already stated, the two cases chosen for study are the *Vimanam* of the Brahadeeswara Temple of Thanjavur, and the *Rajagopuram* of the Ranganathasamy Temple at Srirangam. (Fig. 1)

Study One: Brahadeeswara Temple, Thanjavur

Brahadeeswara Temple is a classical monument of the Chola Style. The main temple consists of a tower, the *Srivimana,* over the sanctum sanctorum. The *Srivimana* is pyramidal converges upwardly on a square base, with a total height 60 m. This grand and majestic temple, adorned profusely with works of skilled sculptors, is the visible manifestations of the spirit and culture, priorities and principles, cherished values and beliefs of the people who lived in those days. It was declared as a World Heritage Monument in the year 1987 (Fig.2).

In studying the views of the Brahadeeswara Temple *Vimanam*, it became apparent that this sacred landmark can be seen on the city's skyline from many viewpoints and is an element of several vistas. However, only specific viewpoints, from where the Brahadeeswara *Vimanam* is the main object of the view, or a critical feature in the view-cone, were identified for the study. Such views can be distinguished from others in which the Vimanam is an incidental feature of the greater vista, or, in which only a portion of the landmark can be seen. These elements traditionally provided a way-finding function or another equally useful role, and are worthy of protection due to their significance in the view-cone when compared to other elements of urban development.

Among the numerous views selected, nine viewpoints were shortlisted as representative samples based on the distance from the *Vimanam* (Fig.3, 4, 5, 6, 7, 8, 9). These nine views were further analysed using an assessment framework (Table1)

Figure 1: Location of Thanjavur and Srirangam on the Map of India

Figure 2: The Brahadeeswara Temple, Thanjavur (Image Source: P. Gopalakrishnan).

Table 1: View Assessment Framework for Thanjavur Town

1	2	3	4	5	6	7	8
V1	High	Immediate View	View: Visual Corridor; Dominance: High	Level: Less, Type: Moving vehicles, power lines	Location: Big Temple Road; AVP: Pedestrian path adjoining parking area; Enclosure: Nil; Activities: Commercial; Place Elevation: Ground Level; General Ambience: Average	Locals, Tourist, Pilgrims, Non-religious tourists	A
V2	High	Immediate View	View: Visual Corridor Dominance: High	Level: Less, Type: Nil	Location :Big Temple Road; AVP: Rajarajan Park; Enclosure: Minimum; Activities: Recreational; Place Elevation: Ground Level; General Ambience: Average	Locals, Tourist, Pilgrims, Non-religious tourists	A
V3	Moderate	Intermediate View	View: Visual Corridor Dominance: Marginal	Level: Medium, Type: Power lines, hoardings	Location: Moopanar Road; AVP: Pedestrian path; Enclosure: Minimum; Activities: Residential, Government; Place Elevation: Ground Level; General Ambience: Average	Locals, Tourist, Pilgrims, Non-religious tourists	B
V4	High	Immediate View	View: Visual Corridor Dominance: High	Level: Less, Type : Buildings, vegetation	Location: Membalam Road; AVP: Pedestrian path; Enclosure: Minimum; Activities: Connecting Path Bridge; Place Elevation: 2 stories high from ground; General Ambience: Poor	Locals, Tourist, Pilgrims, Non-religious tourists	A
V5	Moderate	Intermediate View	View: Street view Dominance: Marginal	Level: Medium Type: Mobile towers, buildings	Location: Sepanavari neighbourhood, AVP: Bridge connecting canal, Enclosure: Nil; Activities: Residential; Place Elevation: 1m below ground level; General ambience: poor	Locals	C
V6	Moderate	Intermediate View	View: Vantage point Dominance: low	Level : Medium, Type: buildings, vegetation	Location: Thanjavur railway station; AVP: Platform 2 & 3 west end; Enclosure: Well Enclosed; Activities: Transit Hub; Place Elevation: Ground level; General Ambience: Good	Locals, Tourist, Pilgrims, Non-religious tourists	B
V7	High	Distant	View: Panoramic: Dominance: High	Level: Less, Type: Mobile towers, buildings	Location: Palace complex; AVP: Arsenal Tower; Enclosure: Interior, framed view from southwest side; Activity: Tourist spot, recreational; Place Elevation: 4 stories high from ground level; General Ambience: Good	Locals, Tourist, Pilgrims, Non-religious tourists	A
V8	Average	Distant	View: Panoramic Dominance: Marginal	Level: Medium, Type : Vegetation	Location: Thanjavur Kumbakonam Byepass; AVP: Near railway gate; Enclosure: Nil; Activities: Agriculture; Place Elevation: Ground level; General Ambience: Good	Locals, Tourist	B
V9	Moderate	Distant	View: Framed Dominance: Marginal	Level : Medium, Type : Vegetation, buildings	Location: Thanjavur Kumbakonam rail path; AVP: Train view; Enclosure: Interior, framed view; Activities: Agricultural fields; Place Elevation: Ground level; General Ambience: Good	Locals, Tourists	B

Column1: View Points; Column 2: Visibility of Vimanam; Column 3: Classification of View; Column 4: Type of View & Dominance in Skyline; Column 5: Obstructions; Column 6: Place Characteristics; Column 7: Potential Viewers; Column 8: Significance (A – High; B, C, D - Low); 'AVP'= 'Assessment viewpoint'

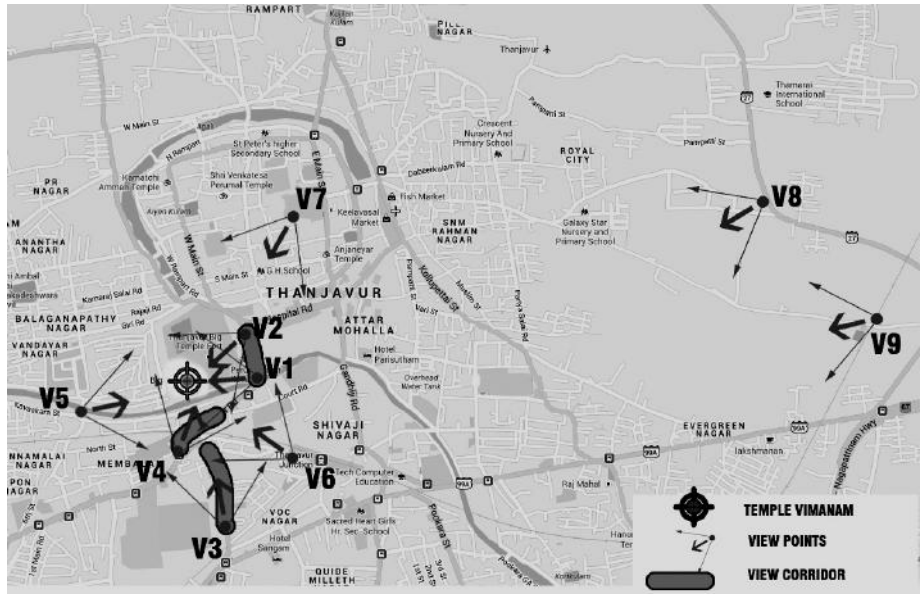

Figure 3: Map of Thanjavur Town showing identified Viewpoints

Figure 4: Thanjavur Viewpoint V1 -- Immediate view of *Vimanam* from the Southeast corner -- Big Temple Road (Image Source: P. Gopalakrishnan)

Figure 5: Thanjavur Viewpoint V2 -- Immediate view of *Vimanam* from the north-eastern side -- Big Temple Road (Image Source: P. Gopalakrishnan)

Figure 6: Thanjavur Viewpoint V3 -- Intermediate view of *Vimanam* from the Moopanar Road (Image Source: P. Gopalakrishnan)

Figure 7: Thanjavur Viewpoint V4 -- Immediate view of *Vimanam* from Membalam Road (Image Source: P. Gopalakrishnan)

Figure 8: Thanjavur Viewpoint V5 -- Intermediate view of *Vimanam* from the Sepanavari pedestrian bridge (Image Source: P. Gopalakrishnan)

Figure 9: Thanjavur Viewpoint V7 -- Panoramic Distant view of Vimanam from the palace complex, Arsenal tower (Image Source: P. Gopalakrishnan)

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Study Two: Ranganathaswamy Temple, Srirangam

Srirangam, a historic sacred town in central Tamilnadu, South India, is an islet bound by the Cauvery River on one side and its distributary, Coleroonon, on the other. Sri Ranganathaswami Temple is the focal point of this Vaishnavite settlement and covers an area of about 631,000 square metres (Fig. 10a, 10b). The temple of Srirangam is the only one in India with seven concentric rectangular enclosures round the sanctuary (Auboyer,1969). The enclosing walls are breached by monumental gates (*gopurams*) placed in their centre, in the axis of the sanctuary and facing the cardinal points. Srirangam was designed in accordance to religious beliefs that shaped the town and set up rules for its layout. The central element of a town had to be a shrine with a holy enclosure.

The main entrance to the temple complex, i.e., the southernmost gateway – the *Rajagopuram* is considered the tallest in Asia, rising to the skies at 71 m height with its 13 tiers (Fig. 11). The gopuram's base measures 50m by 29.1m, while the crown's dimension is 29.4m by 9.6m making it a modern construction marvel. The marvelous *Rajagopuram* was consecrated on March 25, 1985. It is not only a key landmark structure but also an object of worship for many locals and pilgrims.

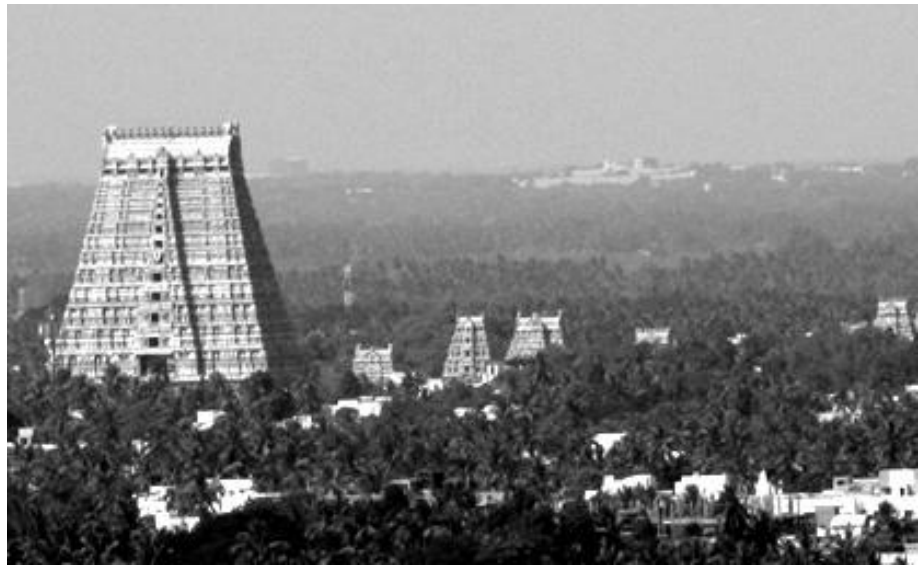

Figure 10a: A distant view of the Rajagopuram of Ranganathaswamy Temple, Srirangam (Image Source: P. Gopalakrishnan)

Figure 10b: Detail of the Rajagopuram of Ranganathaswamy Temple, Srirangam (Image Source: P. Gopalakrishnan).

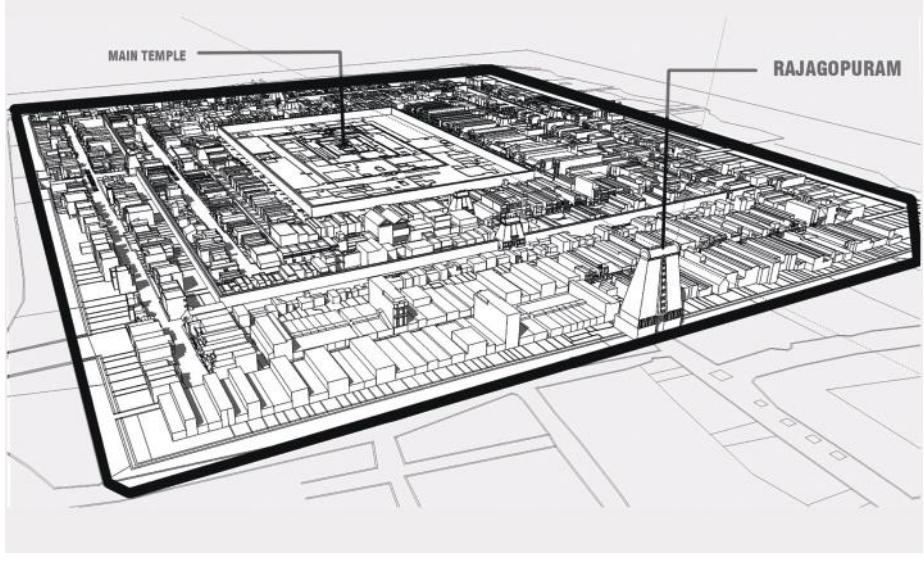

Figure 11: An Aerial View of the Srirangam Temple Complex

The *gopuram* is visible from many places in a radius of about 20km. In studying the views of the *Rajagopuram*, it is evident from the immediate views that the monumental scale of the *gopuram* not only marks the entry to the historic city, but that it also creates a lasting impression on the viewer. The distant views of the *Rajagopuram* also show how it stands out from lush green vegetation of the Srirangam town (Fig. 10a), and provides a pleasing aesthetic experience for the viewer.

Among the variety of views available, nine viewpoints were selected based on location, visibility, view type, etc. These views were mapped (Fig.12, 13, 14, 15, 16, 17, 18) and further analysed using an assessment framework (Table 2).

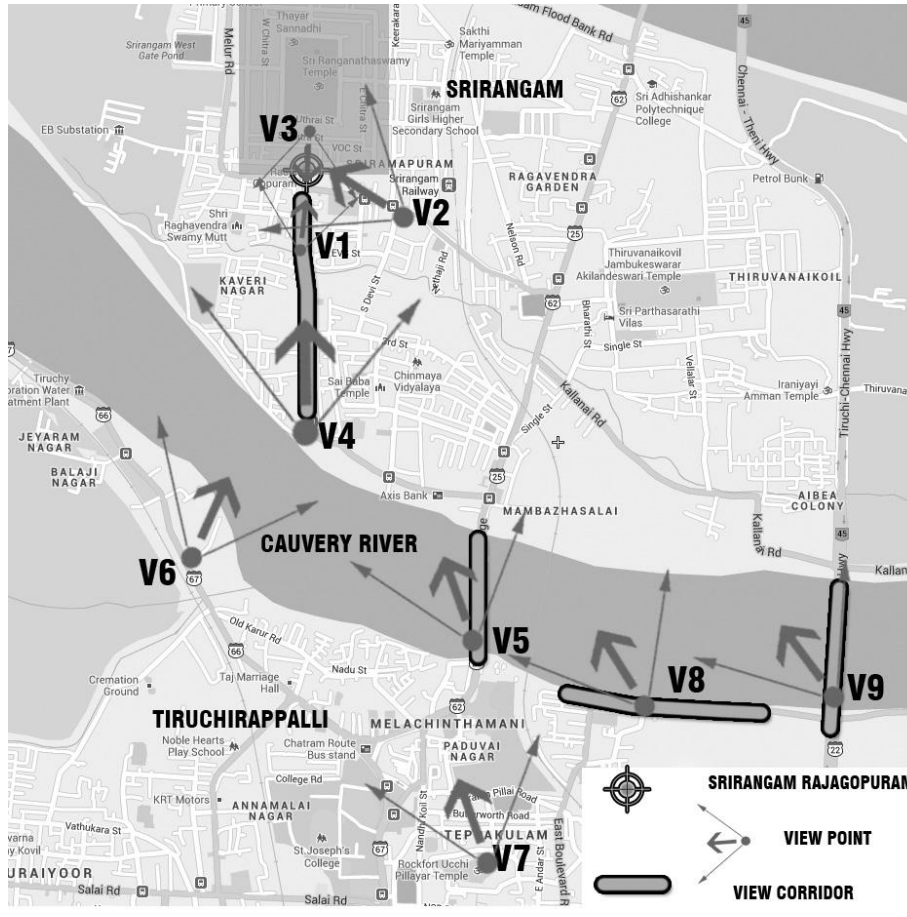

Figure 12: Map of Srirangam Town showing identified viewpoints

Table 2: View Assessment Framework for Srirangam Town**.**

1	2	3	4	5	6	7	8
V1	High	Immediate View	View: Street end Dominance: High	Level: Medium Type: Hoardings, signages, small structures	Location: Srirangam Amma Mandapam road; AVP: Near Periyar staute; Enclosure: Good, terminal vista; Activities: Commerical; Place elevation: Ground level; General Ambience: Average	Locals, Tourists, Pilgrims, Non-religious tourists	A
V2	Moderate	Immediate View	View: Street Dominance: Marginal	Level: High, Type: Buildings, hoardings, signage,	Location: Gandhi road, eastern side; AVP: Near flyover; Enclosure: High; Activities: Commercial; Place Elevation: Ground Level; General Ambience: Average	Locals, Tourists	B
V3	High	Immediate View	View: Street end Dominance: High	Level: Less, Type : Buildings, signage, power lines	Location : Amma Mandapam Road; AVP: Near VOC Street Gopuram; Enclosure: High; Activities: Commercial; Place Elevation: Ground Level; General ambience: Good	Locals, Tourists, Pilgrims, Non-religious tourists	A
V4	Moderate	Intermediate View	View:Street end begin. of Visual corridor Dominance: Low	Level:High, Type : buildings, hoardings, power lines vegetation.	Location: Amma Mandapam; AVP: Amma Mandapam Entrance; Enclosure: High; Activities: Commercial, Bathing Ghat; Place Elevation: Ground Level; General ambience: Good	Locals, Pilgrims	A
V5	Moderate	Intermediate View	View: Panoramic Dominance: Marginal	Level: Medium Type : Vegetation	Location: Srirangam Cauvery Bridge; AVP: Bridge starting point; Enclosure: Nil; Activities: Connecting road; Place Elevation: Moderately elevated from ground; General Ambience: Good	Locals, Tourists, Pilgrims, Non-religious tourists	B
V6	Moderate	Intermediate View	View: Vantage point Dominance: High	Level: Medium, Type: Buildings, vegetation	Location: Karur road; AVP: Near bridge; Enclosure: Nil; Activities: Agriculture, commercial; Place Elevation: Ground Level; General Ambience: Average	Locals, Pilgrims, Non-religious tourists	B
V7	High	Distant	View: Panoramic Dominance: High	Level: Less, Type: Mobile towers, buildings	Location: Rock fort; AVP: Ganapathy Shrine; Enclosure: Nil; Activity: Recreational, spiritual; Place Elevation: 90m from ground level; General Ambience: Good	Locals, Pilgrims, Non-religious tourists	A
V8	Moderate	Distant	View: Panoramic Dominance: Marginal	Level: Medium, Type : Vegetation	Location: Oyamari road; AVP: Bathing Ghat; Enclosure: Nil; Activities: Water related; Place elevation: Ground Level; General Ambience: Good	Locals	B
V9	Moderate	Distant	View: Panoramic Dominance: low	Level: Medium, Type : Vegetation	Location: Trichy-Chennai Highway; AVP: Cauvery Bridge; Enclosure: Nil; Activities: Agricultural fields; Place Elevation: Ground level; General Ambience: Good	Locals, Tourists	B

Column1: View Points; Column 2: Visibility of Vimanam; Column 3: Classification of View; Column 4: Type of View & Dominance in Skyline; Column 5: Obstructions; Column 6: Place Characteristics; Column 7: Potential Viewers; Column 8: Significance (A – High; B, C, D - Low); 'AVP'= 'Assessment viewpoint'

Figure 13: Srirangam Viewpoint V1 -- Immediate view of Rajagopuram from the Ammamandapam Road (Image Source: P. Gopalakrishnan).

Figure 14: Srirangam Viewpoint V2 -- Intermediate view of Rajagopuram from eastern side (Image Source: P. Gopalakrishnan).

Figure 15: Srirangam Viewpoint V3 -- Immediate view of Rajagopuram from northern side – Inside the temple complex (Image Source: P. Gopalakrishnan).

Figure 16: Srirangam Viewpoint V4 -- Intermediate view of Rajagopuram from Ammamandapam (Image Source: P. Gopalakrishnan)

Figure17: Srirangam Viewpoint V5 -- Panoramic Distant view of Rajagopuram from Cauvery bridge (Image Source: P. Gopalakrishnan)

Figure18: Srirangam Viewpoint V7 -- Panoramic Distant view of Rajagopuram from Rockfort temple (Image Source: P. Gopalakrishnan)

ANALYSIS OF VIEWS

In analyzing the selected views of the *vimanam* of the Brahadeeswara Temple of Thanjavur, and the *Rajagopuram* of the Ranganathaswamy Temple of Srirangam, using the methodological View Assessment Framework, it was found that significance of views varies according to the location, visibility, quality of view, quality of viewpoint, view type, etc. Among the variety of criteria used for assessing the view significance, the visibility of structure, its dominance in the skyline and type of view has more weightage than the others. The visibility of the sacred structure is graded, based on the percentage of visibility in a three point scale as Highly Visible, Moderately Visible and Poorly Visible. In classifying the view based on distance, most of the panoramic views are distant views. Among the various types of views, the street end view gains significance due to its spatial configuration. In this view, the viewer's eye is focused towards the temple *gopuram*, as in case of the axial view of the Rajagoppuram in Srirangam (Fig.15). Most of the street end views can be appreciated under the immediate and intermediate view ranges. In case of the immediate view, the viewer is able appreciate the sculptural details of the *gopuram* and *vimanam* in both the study areas. In the case of Brahadeeswara temple, views from the Viewpoints V1 & V2 (Fig. 4 & 5) are very significant because of the unobstructed views of the *vimanam* and, also because a large number of tourist and locals use this place. Similarly Viewpoint V7 is also highly significant due to its elevation which gives a framed panoramic view from arsenal tower in palace complex and also visually connects two heritage structures (Fig. 9). In the case of the *Rajagopuram* at Srirangam, the Viewpoints V1 & V3 (Fig. 13 & 15) are very significant, as because of its high visibility, the monumentality of the structure is well appreciated in the immediate view setting. It also gives a framed view of the other *gopurams* inside the temple complex. The viewpoints between V1 and V3 provide an interesting viewing experience for the viewers, as the inner *gopurams* slowly emerge as the viewer progresses towards Viewpoint V3. The view from the Rock fort Temple, V7, gives a panoramic view of all the *gopurams*, the *Rajagopuram* stands out as a landmark for the entire historic town (Fig. 18).

COMPARISON OF VIEWS AND SETTING OF STUDY AREAS

For evolving a common strategy to protect the significant views of sacred structures it is important to compare the views of different historic settings so as to identify the commonalities in the viewscape. In comparing the settings of the study area, both the historic temples have high historical and spiritual values. The Srirangam temple is an important Vaishnavite centre, which has

Figure 19: View of the Thanjavur Temple Vimanam obstructed by variety of elements (Image Source: P. Gopalakrishnan)

Figure 20: View of the Srirangam Rajagopuram obstructed by variety of elements (Image Source: P. Gopalakrishnan)

local as well as national significance. The Brahadeeswara temple at Thanjavur is a World Heritage monument and has international significance.

When comparing the position of the monuments and their views with respect to the layout of the temples, the *Rajagopuram* is located on the outer precinct of Srirangam Temple, functions as a gateway to the temple and, is visible in entirety from outside the temple complex. The towering *vimanam* of Brahadeeswara temple is part of the main shrine inside the temple complex. The full view of the *vimanam* (Fig. 2) can be appreciated only by viewers who enter its innermost enclosure. The temple is surrounded by a fort wall and a moat, which though acting as a buffer against any new development in the immediate vicinity and protects the view of the *vimanam*, it also obstructs the view of the base structure of the temple. (Fig. 19) In distant views, both these structures are visible from many miles.

In the case of Srirangam's temple, the *Rajagopuram* is surrounded by development around it and there are several elements which encroach the view frame (signage, hoardings, power lines, roof projections, etc.) and detract from the overall visual quality. The lack of exclusive designated viewpoints to experience the *Rajagopuram* view is mainly due to the heavy volume of pedestrian and two-wheeler traffic which passes through the *gopuram* to access the historic city of Srirangam (Fig. 20). However, there is still sufficient scope to improve the environs of the *Rajagopuram* to provide such designated view points. The panoramic view of the *Rajagopuram* from various vantage points along the south bank of river Cauvery, along with the vegetation in the foreground and the other smaller *gopurams* in the background, enhances the view setting. The panoramic view of the Rajagopuram from Rockfort Temple

is the most visited viewpoint by the locals and tourist (Fig.18). A similar panoramic view, showing the dominance of the *vimanam* in the skyline of the Thanjavur city, is available from Arsenal Tower (Fig. 9).

The Ammamandapam view (Fig.16) of the *Rajagopuram* is the starting point of the visual corridor, forming a continuous series of views from the Ammamandapam to the *Rajagopuram*. The quality of view keeps changing due to the enclosure characteristics and vegetation in the foreground. In some of the significant views identified in both the study areas, the presence of obstructive elements which block the view partially was observed. These obstructions are both temporary (hoardings, signage, etc.) and permanent (buildings, power lines, communication towers above buildings, etc.) in nature. From the analysis of views, using the Assessment Framework, it is identified that Viewpoints V1, V2, V4 & V7 (Fig. 3) are more significant than other views in Thanjavur. Similarly Viewpoints V1, V3, V4 & V7 (Fig.12) are more significant than other views in Srirangam.

CONCLUSION

The sacred emotions experienced by pilgrims and religious believers are mostly influenced by the characteristics of the sacred place (Mazumdar.S & Mazumdar.S, 2004). The sacred monument with its symbolic meaning, as expressed through its physical location, design, layout and form, actively engages the believer to experience its sacredness and its architectural beauty. The methodological view assessment of sacred monuments has revealed that both the monuments have high visual quality and a strongly defined sense of place, characterised by their architectural form. Given their dominance in terms of height and size they are highly visible from many public places. The results of the study demonstrate the method for assessment of views so as to identify the significant viewscapes for preservation and enhancement.

This study not only classifies the significant views, viewpoints, visual corridors which need to be protected but also identifies the obstructing elements which need to be removed from the viewscape. The study has also revealed that the characteristics of the viewing place have very little influence on the significance of the view. Even if the general ambience of the viewing place is poor, it is still appreciated and frequented if the point offers the best view available. However, improving such view places will enhance the viewing experience.

It was also found from the comparison of views that there are many similarities in the view types, viewpoint characteristics and view obstructing elements in both the study areas. This Viewscape Assessment Study can be

further modified to assess the views of significant visual resources in other sacred cities in Tamil Nadu (i.e., Madurai, Tiruvannamalai, Kumbakonm, Chidambaram, etc.) for the purpose of viewscape preservation. The view of sacred monuments brings people closer to religious ideals, spirituality, community, and place. By preserving and enhancing the views of the sacred monuments the connection between people, religion and place becomes strengthened.

REFERENCES

AUBOYER, J. (1969). *Sri Ranganathaswami -- A temple of Vishnu in Srirangam*. Srirangam: Srirangam Temple Publication.

BACON, E. (1967) *Design of Cities*. London:Thames and Hudson,

BALASUBRAMANIAM, K. (1994), "Thanjavur: AD 600-1850", Thanjavur: Thiruvaduthurai Adinam Publication. (Language: Tamil).

BALASUBRAMANIAM, K. (2004). *'Gopurams Kalai Marabu' Traditional*. Thanjavur: Koirkalangium. (Language: Tamil)

BENEDIKT, M. L. (1979) To take hold of space: isovists and isovist fields. Environment and Planning B. 6. p. 47 - 65 http://dx.doi.org/10.1068/b060047

BURCHER, L. (2005) 'Urban Character and Viewscape Assessment', paper presented at ISoCaRP congress. [Online] Available from: www.isocarp.net/Data/case_studies/643.pdf. [Accessed: 23.11.2012]

BUREAU OF PLANNING PORTLAND (1991) *Scenic Views Sites and Corridors, Scenic Resources Protection Plan.* Oregon: Bureau of Planning Portland

CITY OF AUSTIN (1983). *Capitol View Preservation Study.* [Online] Available from: https://transformgov.org/Documents/Document/Document/301744 [Accessed: 14.10.2012]

CITY OF SEATTLE (2001) *Seattle view protection policy, volume 1, Space Needle – Executive report & recommendations.* Seattle: City of Seattle.

CITY OF VANCOUVER (1997) *Special Council Meeting Minutes: Downtown Vancouver Skyline Study.* [Online] Available from: http://www.vancouver.ca/ctyclerk/cclerk/970407/skyline.htm. [Accessed: 17.01.2013]

GREATER LONDON AUTHORITY (2008) *Supplementary Planning Guidance -- London View Management Framework (LVMF).* [Online] Available from: http://www.london.gov.uk/priorities/planning/supplementary-planning-guidance [Accessed: 17.01.2013]

LEBLANC, F. (2008) 'World Heritage: Defining and Protecting Important views' paper presented at Round Table, Canada Research Chair on Built Heritage, Montreal. [Online] Available from: http://www.icomos.org/fleblanc/publications.html. [Accessed: 03.01.2013]

MAZUMDAR, S., and MAZUMDAR, S. (2004). Religion and Place Attachment: A Study of Sacred Places. *Journal of Environmental Psychology*. 24. p. 385-397. http://dx.doi.org/10.1016/j.jenvp.2004.08.005

SINGH, R. P. B. (1993) Introduction: The Layout of Sacred Places. *Architecture & Behaviour.* 9(2). p.161-162.

THIEL, P. (1961) A sequence experience notation for architectural and urban space. *Town Planning Review.* 32. p. 33- 52.

ZACHARIAS J., (1999) Preferences for view corridors through the urban environment, *Journal of Landscape and Urban Planning*. 43. p. 217-225.