

CHAPTER 7

CONCLUSION AND RECOMMENDATIONS

Planning and designing traversed landscapes along the road corridors is a challenging and demanding pursuit for the planners and designers. Consistent efforts by several agencies in a trans-disciplinary mode is necessary to achieve better results. Recommendations for each of the six vistas are addressed in different scales of planning and effective times of execution as well as benefits that could accrue to the regional economy. At the local micro scale of planning (for example, roadside and median planting activities) along the traversed landscapes and their immediate precincts, a short range planning strategy, or a regional level planning strategy such as the Right-of-Way policy, may be adopted for making the corridors and their traversed landscapes worthwhile as recreational – stress relieving, even psyche-boosting – areas for both the current and the future periods and in both the short-run and the long-run.

In landscape planning, the essential processes of nature-environment protection, conservation, enhancement and revitalization are the core of human interventions to make for sustainable landscapes. In most times, even a very simple ‘green design’ or a ‘planting design’ like en-framing a traversable view, or masking an eye sore, or establishing a contrasting background to an existing object of admiration with vegetation would likely fetch great results as a short range inexpensive solution. In addition, the simple roadside planting itself adds to road safety, soil stabilization, visual appreciation and lowering noise levels, buffering and so

on. Landscape planning processes can indeed be carried on as a local, participatory activity to boost the local economy as it has been applied in India as well as elsewhere as a public-private partnership program under aegis of a 'Road Beautifying Association' (RBA). Such an association was, for example, established in 1928 in Great Britain by Wilfrid Fox with the goal of improving the environment around new roads. The effort, and achievements, have helped Britain out of its economic depression of the 1930s.

Presently, the Indian NGOs and the Indian Civil Society organizations may be brought in as partners in public efforts and may even be coordinated by the Central and State Governments and Local Authorities to mobilise local youths and conditions with national and regional planning and landscape design institutions. Planting plan should however use mainly local species as observed in local vegetation that may enhance the green value in scale and intensity and not deviate from its basic character. The landscape Vistas 3-6 have great potentials as a 'bicycle' (for local people) and 'mobike' (for long distance travellers on business) routes and of course for the tourists. Further, the Vistas may be strengthened as facilities such as 'park and ride' view sites and spots, rest areas and with 'commuter-parking' facilities.

All the above can be planned, designed, developed and managed by the Local Authorities, Highway Authorities with local people participation and coordination. The recently launched Jawaharlal Nehru National Urban Renewal Mission (JNNURM) 2011 can share the financial implications of the above. Therefore, it is suggested that traversed landscapes can be addressed in all *legal, legislative and executive* dimensions. A few of the observations and recommendations that are practical for the six landscape vistas are discussed briefly below:

Landscape Vista 1 links Mount Road and Kathipara Junction further towards Porur. It is urban plain landscape in character.

A predominantly dense built form component with proximity to a busy transport corridor, it is beyond any major change in the existing position of built form presences, as indeed a skewed and enclosed spatial conditions. As such, only micro level design strategies can be helpful and are necessary for introducing decorative and exotic vegetation and ‘avenue trees’ specially seasonal flowering trees and shrubs (*jakadranda*, *polyalthia longifolia*, *hibiscus rosa-sinensis*, *hibiscus schizopetalus*, *millettia pinnata*, *bauhinia acuminata*, *ixora coccinea*, *mimusops elengi* that are native to the landscape) as intermittent linear clusters at strategic locations of importance like junctions, places of interests (such as Thousand Lights Mosque, Spencer Plaza Complex) and change of levels (Anna Flyover, Saidapet Bridge). A stretch of planter boxes along the medians and pavement edges, in place of metal fencing can bring some vegetation component to this Vista. Further, the ‘visual legibility’ (distinction that makes perceptions easy) of the genuine Indian urban landscape of the Vista 1 is often missing due to an extensive display of commercial hoardings and bill boards clipped to the metallic fencing of the medians of the road.

The paintings of past and present cultural scenes to prevent wall stickers and political writings on boundary walls have been a creative attempt at making Vista 1, especially between Nandanam to Sidapet, a possible act of reaching out to the pedestrians and road users. The major water components, namely the Adyar River and Porur Lake some distance beyond the stretch, may be cleared off encroachments, litters and visual blight. That the corridor may be visually enhanced further with vegetation and space firmaments for the road travellers on two wheelers and auto-rickshaws. A few traveller-respondents have recommended these enhancements for the corridor in their answers to open-ended questions on Vista 1: likes and dislikes (see Annexure 7.1). The one and only natural landform component that already has potential as a visual relief is St. Thomas Mount and even this may be further enhanced

with proper lighting, visual access and entrapment with vegetation. There are of course stretches over which dislike for Vista 1 has been observed among the respondents while addressing the research question that: *Does the location-specific landscape character of Vistas (that is, those decided by the composition of the four landscape components) influence the overall preference scores?*

Component preference scores do indicate that civic conditions, water and vegetation as the highly preferred where there is scope for architects, landscape architects and road engineers in coordinating for a goal that is interdisciplinary. Where the landscape designers work on planting plans, plant material as a means to enhance and en-frame the visually interesting and mask the uninteresting, in consultations with road engineers for safety and visibility measures (see figure in Annexure 7.1i). This may be addressed by the CMDA within the Chennai Metropolitan Development Plan for infrastructure improvement, annually, and as a separate head on traversed landscapes under infrastructure improvements in the sectors of transport. Developing a wider 'green' median, though not feasible considering the existing traffic and vehicular scenarios, lest the visual clutter due to advertisements and electric cables could be avoided through strong regulations. This stretch as in any urban road is a conflict-ridden stretch with shrinking or disappearing pedestrian pavements and several 'visual cues' as hoardings for pedestrian movement. It also conflicts with the visual cues of the motorists. Universal design concepts for easy access to the physically challenged travellers may be taken into consideration as well in planning for enhancements to the Vista 1.

Landscape Vista 2 is a stretch between Porur and Sriperumpudur (NH4) predominantly a built form, though less dense. Most constructions are just 2 stories that cater mainly to commercial uses. It may be necessary to intervene here both on a policy level and on a design level with strategies for

making the stretch visually pleasant for road users and travellers. Future built form height may be restricted, especially at immediate to road situations along the Vista and the Vista may be protected from siting anything too close, depriving an opportunity for visual access of the travellers. The Vista, in a few strategic locations, displays distant hills of Tirusulam, for example, as a backdrop of the views from the road. This stretch may be dealt with further and enhanced with an entrapment of lush and green vegetation. The water bodies that are smaller may also be protected with the already existing policies and legislations in place. The major water component here is the Chembarambakkam Lake, viewed as an open-space character, and this definitely needs visual enhancement along its peripheries, along the NH4 particularly, where the travellers gaze at a full panorama of the lake which is a good visual relief. The pattern of vegetation need wide spacing, considering design scope. Since this stretch also falls within the limits of CMDA, and local authorities like village Panchayats, a cycle and mobike track along the route may be considered with rest areas and with shopping facilities specializing in traditional wares at every 2.5 km (see Marchetti 1994). Note that this stretch, managed by the local authorities, can generate incomes for the locals and the economy from the road travellers.

Landscape Vista 3 is a stretch between Sriperumpudur to Kancheepuram (NH4). Predominantly rural, it is an undulated agricultural plain which is more open space than built over. It is vegetation characterized by agricultural fields and with parches of salt affected lands. Sporadic built forms such as institutional land uses occur, though often at appropriate distances from the Vista. Such land uses do not affect the foreground and the background as there are pleasant landforms in the background with agricultural fields and small lakes in the foreground and along the roads. This stretch must be protected as a policy to save the right-of-way and highway escarpments, which is however poorly vegetated with a variety of shrubs,

especially the flowering plants to enhance the visual experience. A more or less similar plan for further development as in the case of Vista 2 may be implemented with the same basic shopping and park and ride facilities at every 2.5 km along the stretch. Rest areas which can be facilitated with parking, truckers' rest and view stations can be established at strategic locations, may be, at every 10 km within which mobike-ways, park and ride facilities with small traditional shops built with traditional materials, spaced every 2,5 km. The local authorities like the village Panchayats under the auspices of Sriperumpudur and Kancheepuram taluks can be involved in managing and revitalising this part of the stretch of traversed landscapes.

Landscape Vista 4 links Kancheepuram and Chengalpattu (SH58). This Vista has a major regional landscape element, that is, the river Palar. This river is almost always dry in most part of the year and is severely affected by sand mining and tannery and textile dyeing and processing effluent pollution due to a heavy concentration of textile and leather industries. They are a cause for environmental concern because this stretch is characterized by visual blight (slurry dumps, chromium rich tannery solid wastes) and foul smell. It is important and necessary to implement an environmental policy which would protect and conserve the environment. The State Environment and Forests Department can be the implementing agency in coordination with the Kancheepuram district headquarters and administration. Despite its potential as a tourist product with its river floodplains, hills and hilly backdrops, showcasing the rural character of the countryside with palmyra groves amidst agricultural fields, which are a good visual relief for the travellers. Some of the traveller-respondents have, even as they have openly disliked the Vista 4, highlighted the human health and safety issues along the narrow road stretches and the absence of proper street lights.

A proposal may be made through the Kancheepuram Regional Development Plan of the TNTCP, in coordination with the District Administration, to address these issues, and necessary steps that can be taken to protect this stretch from further urbanization so it does not lose its rural character with agricultural fields and forests and hills as a backdrop. Based on the result of the analysed data, the study shows a high preference score for this Vista of landscapes and character types. The Tourism Department, that is, the TNTDC, Chennai in coordination with the District Administration can develop bypasses, cycle and natural trails that may further facilitate and address demands of the new age tourists, who are seeking new and varied experiences. This in fact can take care of the aesthetical and spiritual needs of the commoners and locals. It is also appropriate to take the example of 'rustic roads program' by the Wisconsin County administration which has developed a tourism and economic development model.

Landscape Vista 5 links Chengalpattu town (SH 58) with Mamallapuram town Panchayat. It is the most preferred by the travellers among the six Vistas for the reason that it has natural components like the hills and hilly landforms and landscapes, agricultural fields and many reserved forests (designated as reserved forests in Oragadam, Nimmeli and Thirukazhukundram) and not affected by urbanization. There are several smaller waterbodies, lakes and ponds which display a distinct wilderness quality around them. There are several 'resource patches' that the locals take advantage of in their economic livelihoods. Besides it has a few inselbergs that are geologically interesting, which could be designated as an area of geological interests so as to be protected from commercial or residential developments. This stretch must therefore be protected from urban character built forms. Plant materials can be introduced to mask visual incongruences along the corridor. This stretch, similar to Vista 4, is considered unsafe due to lack of lighting and water and other civic facilities that have to be addressed

by district administration in coordination with the 'gram panchayats'. Trekking and cycle tracks and bypasses are desired by tourists who are looking for special experiences, especially, during the day. The rest areas, park and ride facilities with traditional character may be emphasised to improve the local economy and to satisfy the travellers' needs. The existing avenue plantation as a single row with tamarind trees along this Vista may be modified with introduction of green clusters and 'topes' at strategic location to en-frame a view or as a background for signboards.

Landscape Vista 6 links Mamallapuram with Chennai. It is also preferred as a semi-urban coastal landscape, next to Vista 5, for conspicuous and traditional reason that the presence of a long beach always acts as a magnet for travellers. Historically significant, though rarely mentioned in the tourist itinerary of the TNTDC tour programs, the corridor must be sensibly promoted for road users. Buckingham Canal, for example, is a historical waterway requiring a lot of highlighting. This long inland waterways stretching from North Chennai to Marakanam (a coastal village, more than 100 km from Chennai) has to get its due representation as a tourist attraction. Along this canal, a long stretch of marsh land, least preferred (mean preference rank of 5.31, sixth rank out of seven components) need landscape design intervention (Gobster et al 2007; Nassaur 1995), to evoke a sense of visual delight at a distance from the road. Although the salt pans of the ECR evokes a mean preference rank of 5.31 and hence one of the least preferred by the travellers, its presence showcases a tradition and a traditional means of salt making from the sea water. They are however naively set aside in the tourist itinerary, in spite of its potential as a traveller's interest as a local, cultural attraction. This needs more attention for it could tell us as to how we may capitalise on a local heritage. Presently, only one small area exists as a view spot for the entire stretch of 60 km. More such view spots need to be

designed such that some of which can be 'rest stops' for travellers or park and ride facilities.

The Tamil Nadu Tourism Development Corporation (TNTDC) has initiated professional marketing programs with the brand image of 'Enchanting Tamil Nadu,' with the international and national tourism sectors in the conference of 'SKAL World Congress,' hosted in Chennai, the capital of Tamil Nadu. This has turned out as a turning point to reach international markets. There has been a steady increase in tourists flow in the State since 1997. About a third of the foreign tourists visiting India visit the State of Tamil Nadu. Tamil Nadu is also ranked as the third and the fourth in the inbound domestic and foreign tourist arrivals, respectively (Tamil Nadu Tourism Policy 2002). The Tenth Five Year Plan 2002-07 laid out three objectives, namely: (1) Increasing tourist inflow to 10-12 percent; (2) Stretching the period of stay of domestic tourists to 10-12 days from the present 6-8 days of stay; and (3) Increasing the period of international tourists to 10-12 days from the present 6-8 days of stay, respectively. The National and State tourism industries have also realized the value of close monitoring of tourist profiles, their psychology, and their expectations using feedbacks from the tourists.

Present day, modern tourists have expectations of what a tourist place has to be and what attractions they should offer them. They expect pre-programmed attractions or tourist packages. In this scenario, well-maintained and pleasant traversed landscapes would facilitate tourists prolonging their stays. If the tourism planners and policy makers work towards providing for special but appropriate attractions in terms of transport corridors and their precincts, then there would be increased tourist flows to the places and the Vistas that make up circuit like the one we have taken to study and analyze.

Suggestions for Further Research

This thesis has explained the importance of landscape preference studies as a tool for understanding the traversed landscape preferences by a limited number of travellers and landscape components and also Vistas in view of the limitations of time, manpower and available data and technology for research work. The study gives rise to a few general observations for future research work as below:

- Component approach to landscape assessment can be applied to other road landscapes, corridors and patches, considering critically its local specific character and component mix.
- Landscape classification and characterization can be a research by itself where the present land use data (1:5,000) with detailed field reconnaissance surveys can be employed in understanding the existing and changing character of landscapes.
- Some parts of the methodology can be adopted to identify the most preferred landscape types and their compositions can be analysed to attain the same composition at places dominated by the least preferred landscape components.
- As Zube (2003) has noted the diverse nomenclatures used in the landscape perception and preference studies are part of a multidisciplinary investigation. An universal taxonomy of landscape character types can be made at every level - the national, state/regional and local so there is uniformity of results, that can be periodically updated.
- Goal oriented, trans-disciplinary research as suggested by Antrop, (2006) on perceived landscape can be a part of planning

and design of a continuing program. The academic research can generate common nomenclature in line with the present land use data, applying 'meta-analysis' approach (Stamps III 1999), data and their updates on preference values of landscape components and types,

- Some of the guidelines of Area of Outstanding Natural Beauty programs (AONB) of England to identify areas of outstanding natural and cultural beauty that can be reviewed and adopted to Indian contexts.
- Lessons can be learnt from 'Autobahn' of Germany, 'Rustic road' and 'scenic bye-way' program of Wisconsin County, USA to satisfy issues of traversed landscape as visual resources in Indian urban and rural areas. A study of traversed landscapes can be coordinated with Departments of Tourism, Transport and Planning, and initiated as an academic program as well.
- Traversed landscape and related civic issues can be handled by metropolitan authorities (CMDA) and civic agencies (Madras Corporation) in the Vistas within urban areas and village, taluk and district authorities in the rural areas.
- A signage plan that demonstrates how the State and District authorities assure and make graphics, colour code, number and placement of signs, more supportive of the travellers experience.
- Traversed Landscape Management Plan may be developed with community involvement for promotion of tourism and economic development, taking inspiration from the 'natural England' programs.

- It is observed every landscape preferences studies has inherent quality to keep the research process alive irrespective as an open book that to be interpreted and reinterpreted (Jackson, Meinig) to different contexts and time. So the current study has the potential to be reinvestigated with different site context and method.
- The culturally defined terminologies of the landscape character types has good potential to be applied in the study as suggested by the scholars in the landscape paradigm(Lowenthal 1964,1975; Meinig 1976; Muir 1999; Bourassa 1991; Lehari 2002 and Nassauer 2005,) and several others, and in the travel and tourism paradigm (Lucas 1995; Printice 1997' Lesley Head 2000) and other. So regional contexts terms' kruingi, maruthatm mullai, naithal and, palai as in the study region contexts can be explored further. That can facilitate landscape awareness and as tourism product for economic and tourism activities in the region of current study.

So, considering the vast scope for the study both on the methodological and Geographical dimension and as well in the tourism and landuse planning the current study would emerge as a best tool for planning and design fields. In view of the fact that users as the visual consumers of the landscape and its components and are entailed to view their opinion in all respect to upstage the sprite of constitution. Therefore this kind of study is valuable to the society as a mean to express their preferences. Furthermore, as it is noted in the Chapter 2.5.1, that one of the biggest reason for success of tourism industry in USA and Europe is their excellent roadways. So, it is imperative to improve the beauty of Indian roadways and intangible visual quality of the traversed landscapes. So perception and preferences of the vistas between the urban and tourists centers are vital to improve the satisfaction level of the road travellers.