

Need for More Public Recreation Places in Thiruvananthapuram City

In Relation with Exploring the Possibilities in National Waterway-III Project

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Abstract—Recreational facilities have been always given emphasis in city planning as it contributes to the development of stable communities. Conservation or creation of large open spaces in a city for recreational purpose can also protect natural and cultural features. At the same time in Thiruvananthapuram city the pressures of urban intensification and related issues potentially resulted in the loss of environmental quality and open lands and this issue need attention. There exists an urgent need to retain and generate recreation spaces as needed by the existing and future generation of the population of Thiruvananthapuram. This paper looks into the possibility of generating a recreational corridor along the Parvathy Puthanar Canal in Thiruvananthapuram city in the context of National Waterway-III project.

Keywords—Recreational facilities, open spaces, urban intensification, Parvathy Puthanar Canal

I. INTRODUCTION

The importance of recreation amenities in improving the physical, mental and societal health of any community is accepted world-wide. Therefore, as part of urban planning it is necessary to conserve the stock of open spaces and create more wherever necessary in order to serve the public need. Urbanization rate in Thiruvananthapuram city is increasing every year and is about 1.75 times greater than the state average [1]. But the Thiruvananthapuram city lacks sufficient open spaces for public recreation and leisure activities. The primary objective of this study is to focus on the possibilities of creating a large recreation space in the city. There are two ways for developing an urban open space for recreational purposes; either by conserving the existing natural resources like water bodies, green areas or any other land suitable of recreation, or by creating a space within the developed area through proper planning. Conservation of existing natural resources is the easy way compared to the second for developing a recreation space. Natural and manmade features such as wetlands, water bodies, open grassland, and forests can be enjoyed as open space. Water fronts are the most suitable natural resource for developing a recreation space. An open space along a canal provides a large linear corridor for recreational activities. The scope of the project includes:

- Environmental benefits
- Control over the development along the canal side
- Improve the quality and health of the citizens
- Waterway transportation through canal
- Improvement in tourism sector
- Improve social relationships
- Improves imageability of the city

But this study is limited to Akkulam-Kovalam stretch of Parvathy Puthanar canal and its premises. This stretch has high potential in developing it as a public space due to its locational qualities and land availability.

India is the largest peninsula in the world with a coastline of about 6000 kms and has 14,500 km of navigable inland waterways comprising of river system, canal, backwaters, creeks and tidal inlets. The Inland Waterways Authority of India (IWAI) came into existence on 27th October 1986 for development and regulation of inland waterways for shipping and navigation. This apex body has identified ten waterways for initial consideration for development. These identified waterways are known as the National Waterways (NW), of which NW-III is in Kerala.

Kerala is one of the states in India which is blessed with abundant water bodies including navigable rivers, backwaters and a natural network of waterways. The state Kerala constitute about 12% waterway network in the whole of India, but only about 20% of these waterways are now in usable condition now. The Inland water transport is considered as the most efficient, economic and environment friendly means of transportation. NW-III proposed by the IWAI is the West Coast Canal (WCC) extending from Nileswaram in the North to Kovalam in the South. The scope for developing a recreational corridor along the WCC is transparent through the NW-III project.

Revival of waterways has enormous potentials, especially in promoting tourism and water sports, employment generation, growth of traditional industries and decongestion of road system. The water edges should also be protected and maintained for a better corridor that can be used to meet the recreational needs of the city. Hence the facilities for a recreational corridor should be based on the existing

population and the projected population, to meet the future needs. High quality and well placed recreational areas in the city can foster a positive impression of Thiruvananthapuram as a place to live, work and visit.

II. NEED FOR RECREATIONAL OPEN SPACES IN A CITY

Recreation is an activity of leisure, leisure being discretionary time and is beneficial for both physical and social wellbeing. It has:

- Measurable direct impact on local economies
- Indirect economic benefits like improvement in mental, physical and societal health of local people[2]

Hence every city should provide a zone for recreational activities of the public and the best suited are open spaces like parks, playgrounds, green areas or any other open spaces.

Urban open spaces have increasing importance in city developments due to the urban expansion. This increased pressure for development in city areas is erasing open spaces from the city fabric. Careful open space planning can improve both property values and quality of life of the local communities. Apart from recreation use, open space also allow to improve the quality of environment by allowing the penetration of sunlight and air movement and it will also provide as planting areas for visual relief. Hence benefits of urban open spaces include imageability of the city, recreational benefits, ecological benefit and, aesthetic benefits. Overall it improves the public health through the achievement of these benefits. This land use element, urban open space, is important in a city with high intensity of development and high population density.

A recreational area is:

- A space used primarily for recreation purposes ie an area or facility that people choose to visit or to spend their leisure time;
- Often a community focal point ie used by a number of people at once - multi use;
- Typically associated with the outdoors or with sporting activity;
- Sometimes specialised towards a particular recreational activity or interest group; and
- An area capable of adding to the physical quality of the locality.[3]

Key aspects of recreation in planning:

- Environmental criteria
- Public participation
- Gender aspects
- Security and maintenance criteria
- Accessibility aspects
- Architectural criteria

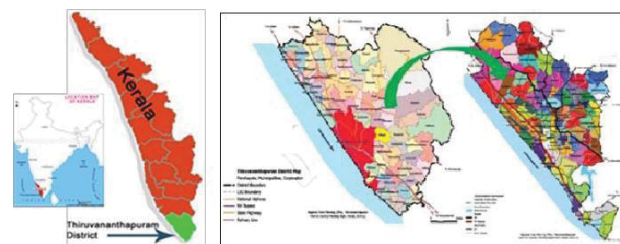


Fig 1. Map of India showing location of Kerala , Kerala map showing location of Trivandrum, District map of Thiruvananthapuram and Thiruvananthapuram city map. Source : www.Maps of India.com, 2014

III. THIRUVANANTHAPURAM CITY

A. Profile of the city

Thiruvananthapuram city, on the southern tip of India, is the capital of the state Kerala. Location map and city map is as shown Fig 1.

The city gets its name from the Malayalam word thiruvanantha-puram , meaning the "City of Lord Anantha".It stretches over the low lying coastal belt and undulated terrain of midland. The city is an emerging metro located at 8° 29' North and 76° 59 East on the west coast. The west side of the city is bordered by Arabian sea and on eastern side at the district border lies the Western Ghats. The city area covers about 214.86 square kilometres(sq.km.). A long shoreline with internationally renowned beaches, historic monuments, backwater stretches and a rich cultural heritage are the major attractions of the city.The population data of the city as per the Census 2011 is as given in the TABLE I.

The sex ratio is 1064 and the child sex ratio is 978 as per the Census data 2011. The city core has attained a density of 7500 peoples per square kilometres (pp sq.km.). Both urbanization factor and educational factors are the most important factors which play a huge role in this kind of urban population density.

Karamana river and Killi river are the 2 major rivers running through the city. Parvathy putthar canal, which forms the part of the West Coast Canal(WCC) on the southern end, lies on the western side of the city. Akkulam and Veli, the major lakes in the city is a major tourist. On the southern tip lies Kovalam, a major tourist destination, famous for beach tourism and health tourism.

TABLE I. CENSUS DATA OF THIRUVANANTHAPURAM CITY

City	As per Census 2011		
	Total	Male	Female
Population	752,490	364,657	387,833
Children (0-6)	61,619	31,156	30,463
Average Literacy (%)	93.72	94.94	92.58

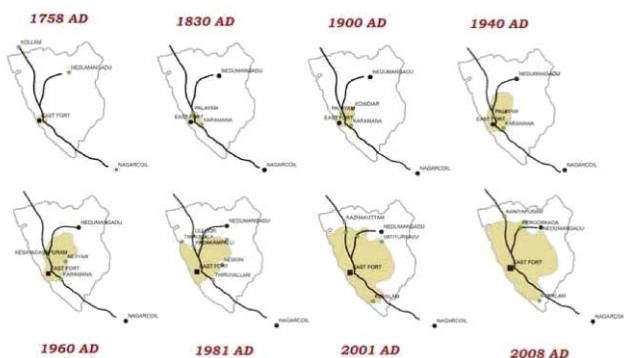


Fig 2. Evolution of Thiruvananthapuram city
 Source : Trivandrum Master Plan (Draft),2012

B. Growth of Thiruvananthapuram city and Need for recreation space in the city

In the Fig 2. the growth of the city over the years is depicted. From the figure it is clear that the urban sprawl of the city is towards the coastal wards.

As per the Trivandrum Master Plan (Draft) released in 2012, population within the corporation is concentrated in the coastal wards on the south of airport and the average population density of corporation is found to be 4444persons/sqkm. The population density is greater towards the core and coastal wards as shown in Fig.3(a). where the Akkulam lake, Veli lake, stretch of the West Coast Canal, Poonthura beach, Panathura beach and Kovalam beach lies. The average population density of Trivandrum is 1509 and the projected population for 2021, as per the master plan (draft), is concentrated in coastal belt with high density greater than 5000 persons per square kilometre (pp km). Since the population density is increasing in this zone there is a need for conserving the existing natural resources and also there exist a need for providing a recreation space for the increasing population. As a solution the existing natural resources can be converted to a recreation zone serving the urban population.

The suggested population density based urban form of the city by 2031 as per the Master Plan (Draft), 2012, as given in Fig.3(b), also shows that the average population density along the coastal wards will become same as that of the core of the city. Hence it is necessary to create a recreation zone for the public in this coastal area as a proactive measure rather than allowing a situation which destroys the existing natural resources. In the Fig.4(a), published in Trivandrum Master Plan (Draft), 2012, the direction of development and high intensity development is marked on the coastal wards, hence it again proves the necessity of a recreation zone in this region. The proposed development concept suggested in the Trivandrum Master Plan(Draft),2012 as in Fig.4(b) is proposing a tourist hub extending from Thiruvallom to Kovalam. Akkulam is a famous tourist destination which is linked to the Veli tourist village. Hence, if a recreation corridor can be developed connecting these two tourist destinations it serve as a continuous recreation corridor from Akkulam to Kovalam benefitting the city.

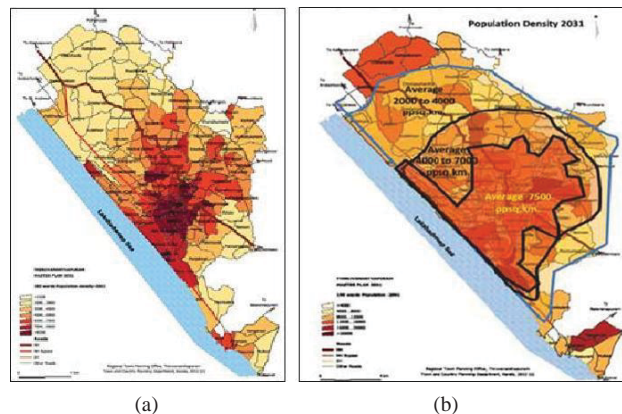


Fig 3. (a) Distribution of Population Density among the wards in corporation and (b) Suggested population density based urban form of the city-2031 Source : Thiruvananthapuram Master Plan(Draft), 2012.

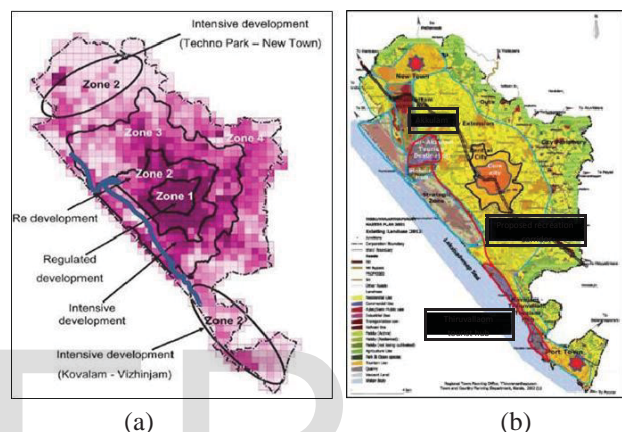


Fig 4. (a) Suggested city form and direction of development and (b) Proposed Development Concept of Thiruvananthapuram city. Source : Thiruvananthapuram Master Plan(Draft), 2012.

The new port city at Vizhinjam which is located on the southern end of Thiruvanthapuram, near Kovalam and the fast development of IT campuses like Technopark on the Northern side are also a reason for the increase in population and other developments towards the coastal area. With the introduction of this recreational corridor majority of the population towards city center can be diverted to canal front. This helps to reduce traffic congestion within the city and provide a green lung to the city.

IV. IDENTIFICATION OF AREA

As discussed earlier there is a need for a recreation zone in the coastal wards due to the increase in population and high intensity development. While planning we need to consider the existing spaces available for recreation purposes and creation of new spaces at required locations.

A. Existing Recreation Spaces in Thiruvananthapuram city

The major recreation spaces in the city are Museum compound and Sangumugham beach, shown in Fig.5. The number people arriving at these locations for their recreational activities and leisure activities shows the demand for such a space in the city and the congestion proves the lack of such



Fig 5. Locations of Museum compound and Sangumugham beach Source : Author generated from the City map of Thiruvananthapuram and Photo of Museum is taken during primary survey, 2012. and photo of Sangumugham beach is from google images

amenities provided by the city. The overcrowded Museum grounds and the Shangumugham beach demands a city beautification project that could make the place slightly more entertaining and relaxing, satisfying the entire city’s need for getaways on holidays.

B. Identifying the Location for a New Recreation Zone

The coastal wards lies in between Museum compound and the Sangumugham beach. Hence development of a recreation zone in this area will be more apt. The Parvathy Puthanar canal, a man-made canal, is running through the coastal wards of Thiruvananthapuram city is as shown in Fig.6. It connects the existing tourist destination, Akkulam and the proposed tourist hub from Thiruvallom to Kovalam. The stretch is accessible from all parts of Thiruvananthapuram city. So the development of a recreation space along the canal from Akkulam to Kovalam provides a continuous open recreation zone for the public. In addition to reducing traffic congestion due the crowd coming for recreation purposes in the city core it also reduces the pollution in the city. The revival of the canal also serves as an alternate mode of transportation and improves the water quality.

Development along the canal conserves the canal and its neighbouring areas. In most of the cities the waterfront is developed for public activities with proper access and amenities and is essential to meet the recreational needs of the urban society. Various examples across the world prove that waterfront public spaces are more active as it attracts people compared any other open spaces. The National Waterway-III project can also be considered as a positive step for reviving the inland waterway system existed in Kerala about fifty years back. The West Coast Canal connects the Nilswaram in the North to Kovalam in the South and is about 590 Km.including the 47 Km. uncut portion from Azhikkal to Badakara, as shown in Fig.7. A portion of the West Coast Canal, i.e. from Kottappuram to Kollam, including the Champakkara and Udyogamandal is already declared as National Waterway-III in1993. Hence while planning it will be easy to incorporate with NW-III project the requirements of a recreation trail along the canal.



Fig 6. Locations of Museum compound , Sangumugham beach and Parvathy Puthanar canal from Akkulam to Kovalam Source : Author generated from the google map, 2012.

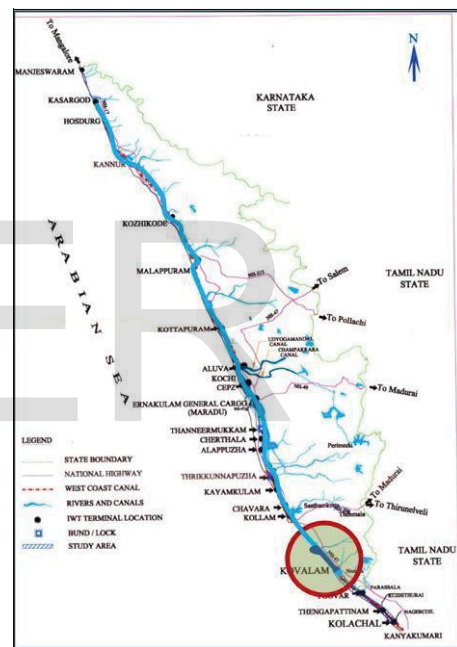


Fig 7. Map of Kerala showing the West Coast Canal and the canal from Akkulam to Kovalam is encircled Source : National Transportation Planning and Research Centre(NATPAC), 2012.

C. Parvathy Puthanar Canal

Parvathy Puthanar canal lies on the southern end of the West Coast Canal (WCC) and runs parallel to the NH-Bypass road. In 1825 A.D. Her Highness Parvathy Bayi sanctioned the construction of Parvathy Puthanar Canal between Trivandrum and Kadinamkulam kayal. In this city limits, the canal also functions as a flood control device since it collects 22 major surface runoff canals per drains of the city and discharges it in to the sea through the Veli and Poonthura sea mouth.

This canal was the principal mode of transportation in olden days. With the introduction of the faster modes of transport like road and rail, the use of the waterways reduced significantly over the years and the use of waterways as a mode of transport was totally ignored. The canal is polluted and is clogged by the waste dumping into the canal and due the growth of weeds.

In the present era, a wide range of cargo such as industrial raw materials, finished products, construction materials, agricultural products and domestic consumer goods can be transported through this waterway, after its revival. Since the cost of the fuel is rising and the congestion on the roads is increasing day by day and also the relative efficiency of fuel in water transport over surface transport is more the need for the revival of this mode of transport is very important. Several waterfront recreation projects reveal that it is possible to revive this polluted canal to serve the public need.

There is also a possibility to extend the canal towards the South of India as we have another canal called A.V.M. canal (Anantha Victoria Marthandom canal) from Poovar to Colachel and further that can be connected to Kanyakumari which helps to increase the tourism potential of the state.

D. Effect water as a Planning Element

Water as a planning element has both aesthetic effects as well as functional effects. Aesthetics effects include visual, audial, tactual and psychological effects, and functional effects include climatic comfort, noise control, circulation effects and recreational aims [4]. Water also improves the linkages to various destinations and attracts people. Hence it is a very efficient element in planning for public oriented activities.

E. Development of Recreation Space Along The Canal

Any planning along the canal front should aims to develop and conserve the canal and its environment.

Development can be based on:

- *Land use* for providing proper zoning of different functions,
- *Connectivity & transportation* to link various destinations and as an alternative mode of transport,
- *Tourism* for economic as well as aesthetic benefits,
- *Recreation* to meet the needs of the local community
- *Economy* by providing more job opportunities through the introduction of various uses and functions including informal markets, shops etc.

Conservation can be either heritage or ecological:

Depending on the heritage value deserved considerations have to be given and measures have to be taken to improve and protect the canal and its function. Through the conservation of the canal and canal front several environmental benefits can be achieved as it protects the

natural habitats and provide a green open space for the city improving the environmental qualities.

V. GENERAL PROPOSALS FOR RECREATION SPACE ALONG THE CANALFRONT

There should be

- Parking spaces at major nodes connecting the city with the canal
- Continuous walkway for better connectivity and communication
- Pedestrian amenities like street furniture, refreshment nodes etc.
- Barrier free movement
- Enhancement of existing activities
- Identification of location based recreation activity

VI. CONCLUSION

Open spaces or green areas which are used for wide range of recreational activities are of major significance to the quality of life in a city and have an important role in the sustainable management of natural and physical resources. The vanishing open spaces and other natural resources due to the intensive urban development in Thiruvananthapuram city are major issues and need attention to restrict the development. The demographic studies and the urban form of the city show high intensity development along its coastal wards, which establishes the need for a large recreation space in that region. The National Waterway-III project reveals the possibilities for developing a recreational corridor along the Parvathy Puthanar Canal and also the revival of this historic canal. As discussed earlier the easiest way of developing an area for recreation activities is by conserving existing natural resources. The Parvathy Puthanar canal is flowing through the coastal wards and green areas are available along the canal. This shows that development of a corridor along this canal will be more ideal for serving the recreational needs of the citizens.

Acknowledgment

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