



# BACKWATERS AS URBAN EDGE

BOOK BINDERS AND DRY LIFE

## INTRODUCTION

The backwaters of Alappuzha, part of the traditional lake systems are the region's defining feature and core of the settlement, economy and culture. Formed by the meeting of rivers and the Arabian Sea, they create a network of lagoons that once served as vital transport routes for rice, spices, and fish, making Alappuzha a key trading hub. Over time, they regulate floods, support the extensive tourism industry, biodiversity, and are the primary source of drinking water. However, rapid urbanization and industrial growth have degraded the backwaters' natural beauty. Through this publication, stakeholders and urban growth exchange ideas. The backwaters remain central to Alappuzha's identity, connecting its past, present, and future.

## HISTORY AND EVOLUTION



Formation of traditional lake. The Venetian Flood Theory & Dutch Settlement Theory  
Early backwaters. The lake system was utilized by ancient Indians including the Harappan civilization and before colonisation.  
Trade and commerce. Lake facilitated trade between nearby Empires, resulted in further development of settlements.  
Agricultural Development. The 15th century saw significant agricultural development with cultivation of rice, sugarcane, and other crops.  
Tourism. After the arrival of Dutch, trade - resulting led to become an important source of Economic Development.  
Risk of Inundation. All around the backwaters are completely utilized for tourism. The settlement along these lake shores were modified according to it.

## ECOLOGICAL CONTEXT

### FLORA

Coconut Tree  
Mangrove Tree  
Public Water  
Water Hyacinth  
Tide  
Water Lily  
Water Hyacinth  
Waterweed & Mollusk

### FAUNA

Waterfowl  
Frog  
Turtle  
Crayfish  
Duck  
Water Snake  
Duck  
Water Snake  
Duck  
Water Snake  
Duck

## SETTLEMENT PATTERNS & LAND USE

The land use patterns along the edges of backwaters consist of agricultural fields, settlements and fishing harbours. Tourism infrastructure like boats, resorts, houseboats, etc.



## EDGE CONDITIONS

The built edge of the Alappuzha backwaters near the towns, public fields, and settlements. The backwaters around the backwaters were mostly a wetland pattern.

### Linear Urban Settlement

Settlement Settlement

The edges of the lake shores is used as prominent and visible for access to the houses.

Every houseboat has steps to access the backwaters, for relaxing, fishing etc.

## SOCIO-CULTURAL RELATIONSHIP



## ENCROACHMENT AND DEGRADATION

Through these backwaters and tourism sites in the economic development it creates a major threat to the local ecological and cultural systems around the backwaters.

Threat of encroachment and the reduction of water level due to the construction of water systems.

The boat traffic and the pollution also leads to a shift of lake water level and degradation of other natural resources.

To reduce flood incidence and risk management, the local people and government had taken many initiatives by introducing modern drainage and water management systems.



Palmer's Lake, which is a part of traditional lake but, gradually become an artificial water body in Kerala for building the artificial lake. The lake was built during the British rule. The lake still acts as a major source of water for the local people. The lake still acts as a major source of water for the local people. The lake still acts as a major source of water for the local people.

## OWNERSHIP & ACCESS

The management of backwaters involves several government bodies and community groups. The Kerala Backwaters Board regulates boats and backwaters, while the Directorate of Public Health handles cleaning and sewage. The Kerala State Pollution Control Board ensures environmental compliance and pollution control. State and Municipal authorities manage land use, permits, and connectivity rights. The Tourism Department and STP Alappuzha oversee tourism-related activities and infrastructure, while the State Water Transport Department oversees public ferries and inland transport. Alappuzha Town, Municipal Council, backwaters, tourism, education, health, and local government all play a role in maintaining the region's backwaters and tourism infrastructure.

## POLICY, PLANNING, GOVERNANCE

All backwaters must be regulated under the National and Planning Authority. There is a National Backwaters Board, established in 1952 on the basis of the National Backwaters Act, 1952.

Houseboat must use 10% of earned income for tourism and backwaters. Houseboat must use 10% of earned income for tourism and backwaters.

State water. If any water disposal pollutes backwaters, it is a crime. State water. If any water disposal pollutes backwaters, it is a crime.

## INFRASTRUCTURE

The backwaters are a vital part of the region's infrastructure and economy. They provide a unique and scenic environment for tourism and recreation. The backwaters are a vital part of the region's infrastructure and economy.

# Mullakkal Street: A Vibrant Urban Public Spine

## Historical Evolution & Significance - Role in Alappuzha's growth and identity.

Mullakkal Street in Alappuzha has historically been the heart of the town's commercial and cultural life.  
A development during the colonial period, centered around the iconic Mullakkal Rajagopal Temple.  
The street played a key role in trade and commerce, especially during the monsoon season.  
It became a cultural melting pot, reflecting Alappuzha's diverse religious and social fabric.  
Today, it remains a vital symbol of the town's heritage, linking its past with modern urban life.

## Movement Patterns - Pedestrian and vehicular flows, congestion points.

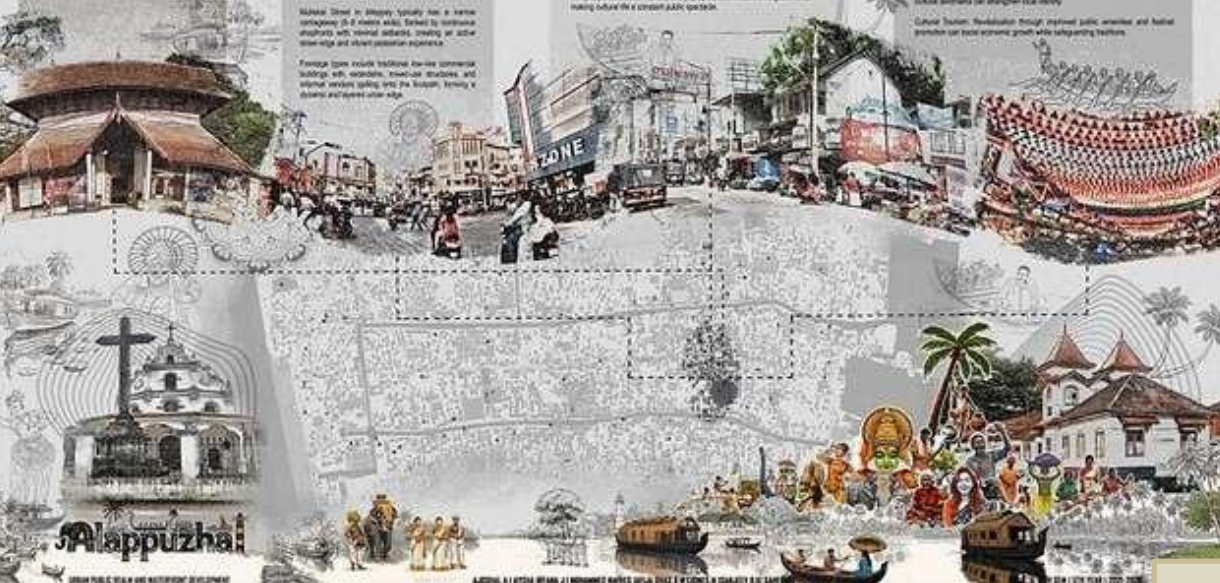
On Mullakkal Street, pedestrian flow peaks during morning, market hours, and late afternoon, with shopping, commuting, and social activities. Vehicular flow is heavy at junctions near the temple and main shopping centers, causing bottlenecks during festival days.  
Congestion is most severe near major entrances to the Mullakkal Temple and busy ATMs where street vendors and parked two-wheelers reduce visibility.  
Street Morphology - Width, frontage types, edge conditions.  
Mullakkal Street in Alappuzha typically has a narrow morphology (8-12 meters wide). Flanked by commercial buildings with minimal setbacks, creating an active street edge and vibrant pedestrian experience.  
Frontage type includes traditional low-rise commercial buildings, with ornate, traditional structures and vibrant signage lighting over the sidewalk, creating a historic and vibrant urban edge.

## Land Use Distribution - Retail, religious, cultural, residential mix.

Retail activities Mullakkal Street with continuous shops lining the road including jewelry, garments, handicrafts, spices etc., while the Mullakkal Rajagopal Temple are mostly situated further the religious and cultural landscape. pockets of residential are mostly set back or located above shops.  
Cultural Life & Events - Festivals, markets, processions.  
Mullakkal hosts the annual Chingam festival, a 17-day event culminating in grand processions, lighting, temple music and street markets that draw visitors from across the region.  
Along with religious events the festival and the women's festival at Mullakkal Temple, processional markets and popping stalls animate the neighbourhood, making Mullakkal life a vibrant public spectacle.

## Challenges & Opportunities - Encroachment, heritage conservation, revitalization ideas.

**Challenges:**  
Encroachment: Street vendors and parked vehicles narrow pedestrian and vehicular pathways, causing congestion and safety issues.  
Heritage Conservation: Rapid commercial development threatens the conservation of historic buildings and the traditional character of the area.  
Infrastructure: Street inadequate infrastructure and parking near the crowded market environment, especially during festivals.  
**Opportunities:**  
Heritage Conservation: Promoting and restoring low architectural and cultural buildings can strengthen local identity.  
Cultural Tourism: Revitalization through improved public amenities and festival promotion can boost economic growth while safeguarding traditions.





# ALAPPUZZHA BEACHFRONTS: RECREATION, ECONOMY, MEMORY

## RECREATION: MAIN ACTIVITIES

Leisure promenading, sunset viewing, family picnics, informal play, kite-flying and small vendor stalls.

Organized events: annual Alappuzha Beach Festival, sand-art competitions (national/international participants), New Year gatherings and occasional cultural performances on the beachfront. These events raise the town's profile and create seasonal peaks in visitor numbers.

**VISITOR FACILITIES:** small parks, a promenade, and viewing points around the pier, beach chair/lounge, ice rentals are common near tourist seasons.

**SOCIAL VALUE**

The beachfront is an inter-generational public space – children, elders, migrant workers and tourists all use it. It doubles as both everyday civic space and a spectacle site for large gatherings.

## ECONOMY – DIRECT AND INDIRECT LIVELIHOODS

**Tourism & services**

Houseboats & backwater tourism are Alappuzha's economic backbone; beachfront tourism complements the backwater economy by keeping visitors longer (meals, souvenirs, local transit). Studies note tourism's multiplier effect on local employment (hospitality, guides, transport). Events and festivals (sand-art, beach festival) generate short-term spikes in demand for hotels, food stalls, transport and crafts.

**Marine & traditional livelihoods**

Small-scale fishing and fish landing near adjacent stretches contribute to local food systems and employment (fish vendors, boat crews). The coastal economy also ties into the region's core and allied cottage industries historically.

**Public revenue & investments**

The district and state tourism bodies invest periodically (beach parks, maintenance, promotion). However, infrastructure investment is often incremental and event-led rather than part of a continuous coastal management plan.

### MEMORY – HEART OF IDENTITY AND YOUTHFUL VALUES

The pier, a lifeline to the sea, is a place of memory. It is a place where the past meets the present. It is a place where the town's history is alive. It is a place where the town's identity is rooted. It is a place where the town's values are embodied.

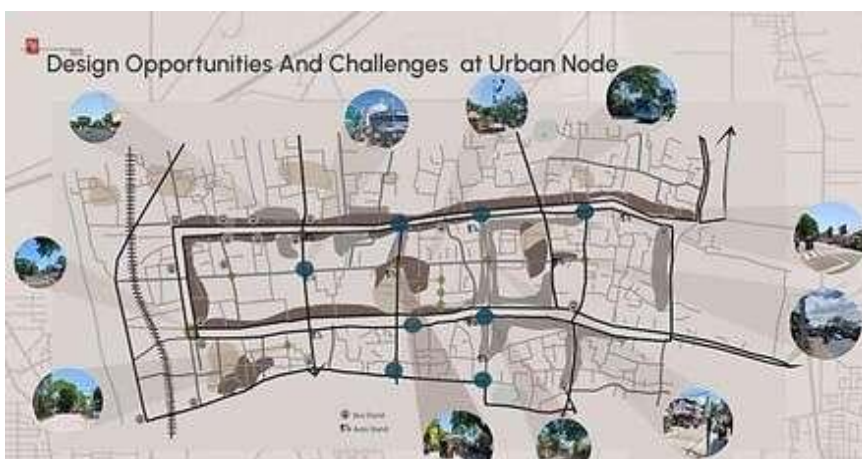
The pier is a place of memory. It is a place where the past meets the present. It is a place where the town's history is alive. It is a place where the town's identity is rooted. It is a place where the town's values are embodied.



**Alappuzha**

URBAN PUBLIC BEACH AND WATERFRONT DEVELOPMENT

## Design Opportunities And Challenges at Urban Node



**Challenges**

<b>Yezha Junction</b>	<b>Pelhu Yezha Junction</b>	<b>District Court Bridge junction</b>	<b>Zero Junction</b>	<b>Cullen + Pellinguvayal junction</b>	<b>Changan Bridge Junction</b>
High concentration of buildings in the area, leading to a dense urban fabric. The area is characterized by narrow streets and a mix of building heights.	High concentration of buildings in the area, leading to a dense urban fabric. The area is characterized by narrow streets and a mix of building heights.	High concentration of buildings in the area, leading to a dense urban fabric. The area is characterized by narrow streets and a mix of building heights.	High concentration of buildings in the area, leading to a dense urban fabric. The area is characterized by narrow streets and a mix of building heights.	High concentration of buildings in the area, leading to a dense urban fabric. The area is characterized by narrow streets and a mix of building heights.	High concentration of buildings in the area, leading to a dense urban fabric. The area is characterized by narrow streets and a mix of building heights.

### Analysis

**District Court Junction**

This junction is the main point in Alappuzha from which all different directions meet here. It is a junction of all types of vehicles – buses, autos, and bikes – plus through traffic that is a result of main connecting roads but also causes traffic jams.

**Major thoroughfares include:**

- State bridge, Veli bridge, Central hospital junction, Vithayyil, Pelhu Yezha, Changan Bridge, District Court Junction.

**Transport terminals**

The GSTC terminal is also located by the side of the road in the central area. The terminal facility is located at Vithayyil. The area is also located on the side of the Veli canal near the GSTC, but the terminal is also located by the side of the Veli canal near the GSTC bus station. The traffic congestion is a major problem.

Due to the location of the GSTC bus station, the area is a major transport node and is required to enter the town, thereby increasing traffic congestion.

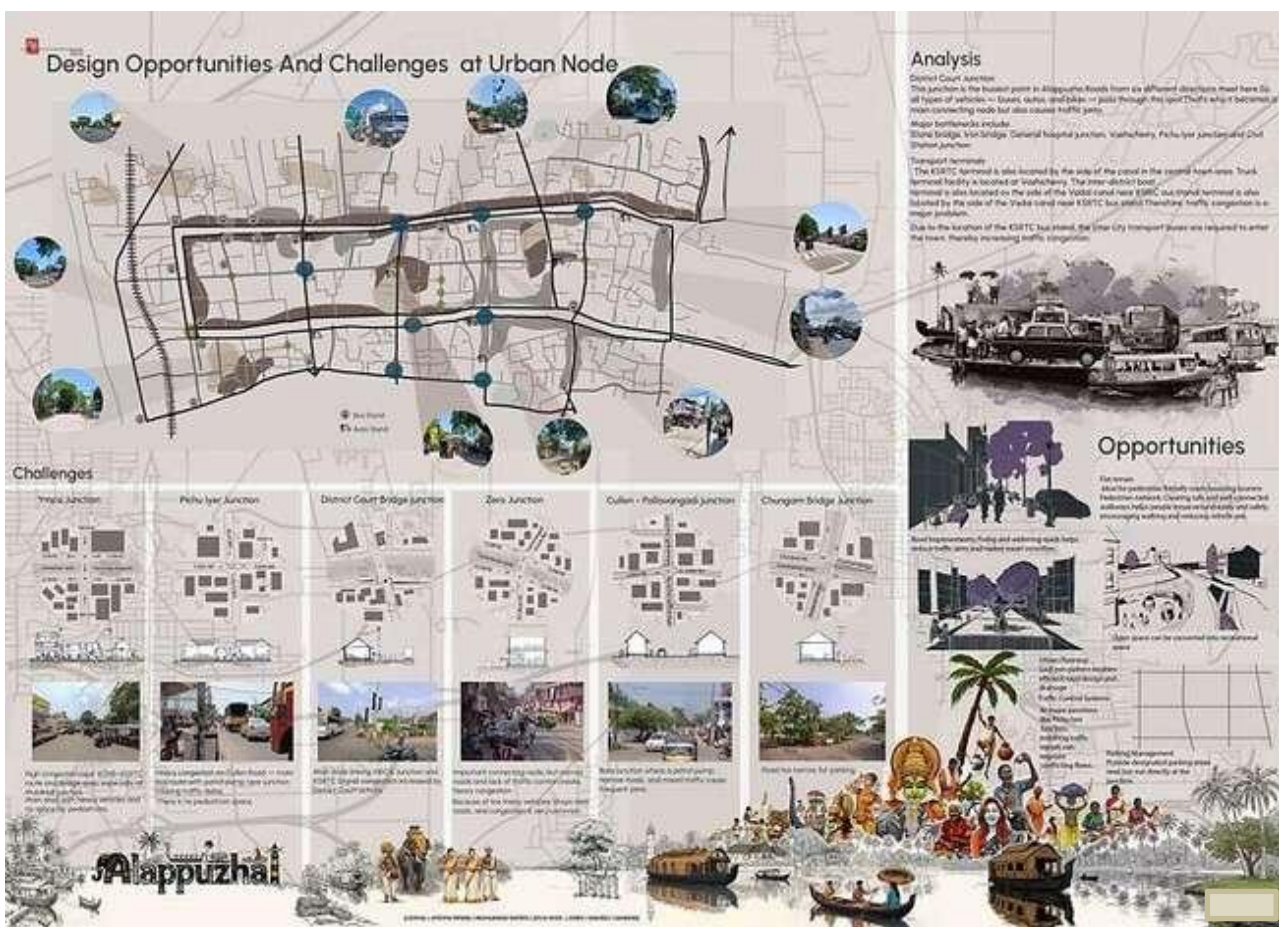
### Opportunities

**For urban**

- Strengthen pedestrian network, creating a more pedestrian-friendly environment.
- Improve public transport services, including better bus routes and more frequent services.
- Improve the urban fabric, including better building heights and more green spaces.
- Improve the urban fabric, including better building heights and more green spaces.

**For water**

- Improve the urban fabric, including better building heights and more green spaces.
- Improve the urban fabric, including better building heights and more green spaces.
- Improve the urban fabric, including better building heights and more green spaces.
- Improve the urban fabric, including better building heights and more green spaces.



**Alappuzha**

URBAN PUBLIC BEACH AND WATERFRONT DEVELOPMENT

**Thiruvirappur Boat Race**

Annual boat festival, Kuttuvallur, Kerala. Held on Punalayam Lake near Muzhappilangad. Celebrated annually on the second Sunday of August. Boats are made of high operations, including ornamental decorations. A procession moves along the lake and ends at the festival stage.

**Mar Thoma Festival (Thiruvir)**  
Held at the Mar Thoma Cathedral in Kottayam. Celebrated annually on the second Sunday of August. Boats are made of high operations, including ornamental decorations. A procession moves along the lake and ends at the festival stage.



Procession starts. A procession less than one people... (text is partially obscured)



**THIRUVIRAPPUR BOAT RACE**  
The festival of boats... (text is partially obscured)

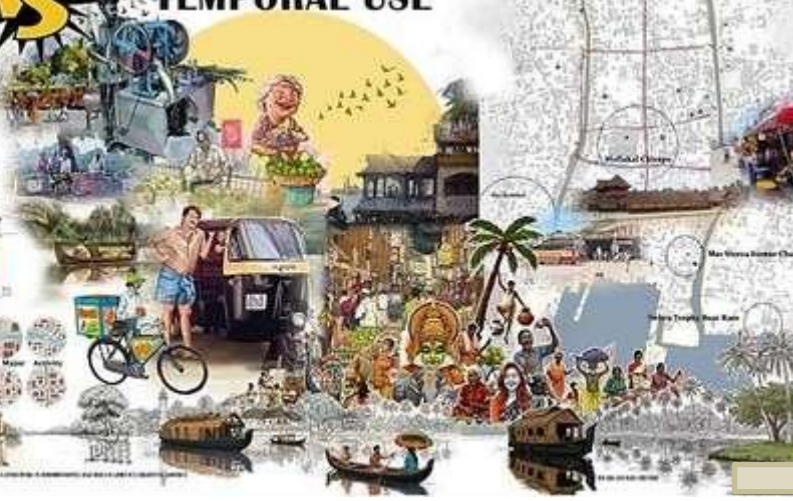
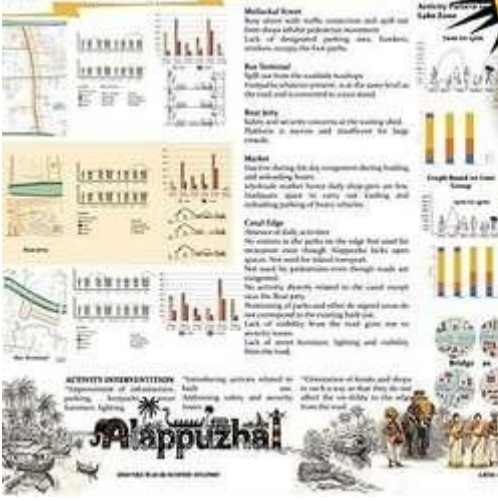


**PERUMBA NEEDHUR**... (text is partially obscured)



**MOUNT CARMEL CHURCH**... (text is partially obscured)

**SEASONAL USE IS TEMPORAL USE**



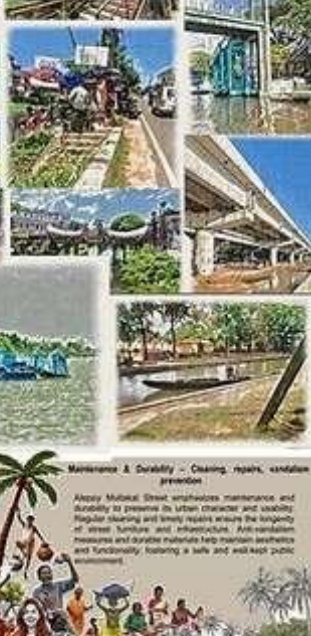
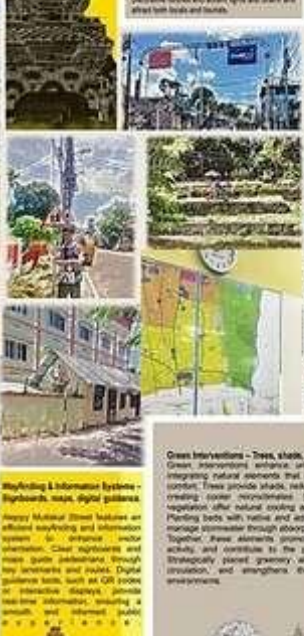
**Urban Furniture, Lighting, Amenities in Public**

**INTRODUCTION**  
 Alappuzha Municipal Street integrates urban furniture, lighting, and amenities to enhance comfort, safety, and visual appeal. Thoughtfully designed seating, signage, and lighting create a welcoming pedestrian environment. These elements, together with the street's cultural character and public spaces, define Alappuzha Street as a vibrant urban space.

**Urban Furniture Inventory - Seating, bins, signage, decorative elements**  
 The Urban Furniture Inventory of Alappuzha Municipal Street includes seating, bins, signage, and decorative elements that enhance usability and aesthetics. Comfortable benches are placed at intervals to provide rest for pedestrians. Bins are strategically placed to maintain cleanliness and reduce littering.

**Lighting Design & Distribution - Functional, aesthetic, safety lighting**  
 The lighting design and distribution along Alappuzha Municipal Street are thoughtfully planned to balance functionality, aesthetics, and safety. Functional lighting provides uniform illumination along pathways, ensuring smooth movement for pedestrians and reducing lighting-related accidents. Aesthetic lighting enhances the street's cultural character, highlighting landmarks, fountains, and heritage structures to create vibrant nighttime experiences. Decorative fixtures and smart lights also create and affect both looks and moods.

**Accessibility & Inclusivity Features - Ramps, tactile paths, universal design**  
 Alappuzha Municipal Street integrates accessibility and inclusivity features to create a barrier-free environment. Ramps are installed at building entrances, curbs, and crossings for smooth wheelchair access. Tactile paths are used to guide visually impaired pedestrians in safe and independent navigation. Seating and pathways are designed with adequate width and gentle slopes for ease of movement. The street's layout, signage, and design principles, ensuring superior safety and equal access for all users.



**Wayfinding & Information Systems - Signposts, maps, digital displays**  
 Alappuzha Municipal Street features an efficient wayfinding and information system to enhance user navigation. Clear signposts and maps guide pedestrians through the landmarks and public spaces. Digital display boards, such as QR codes or interactive displays, provide real-time information regarding street events and information, enhancing public awareness.

**Green Interventions - Trees, shade, planting beds**  
 Green interventions enhance urban and architectural spaces by integrating nature elements that improve environmental quality and comfort. Trees provide shade, reduce heat islands, and purify the air, creating cooler microclimates. Shade structures combined with vegetation offer natural cooling and protection from harsh sunlight. Planting beds with native and adaptive species support biodiversity, manage stormwater through absorption, and enhance aesthetic appeal. Together, these elements promote walkability, encourage outdoor activities, and contribute to the environmental well-being of users. Strategically placed greenery also reduces noise, improves air circulation, and strengthens the ecological resilience of built environments.

**Maintenance & Durability - Cleaning, repairs, condition prevention**  
 Alappuzha Municipal Street emphasizes maintenance and durability to preserve its urban character and usability. Regular cleaning and timely repairs ensure the longevity of street furniture and infrastructure. Anti-rust treatments and durable materials help maintain aesthetics and functionality, fostering a safe and well-kept public environment.

# COMMUNITY ACTIVITIES AND SOCIAL INTERACTIONS ON WATERFRONT



## Bochwater and canal life

The extensive network of canals in Alappuzha is central to daily life and social activities for residents. Early in the morning, fishermen and boatmen gather along the canals, marking the start of a busy day. Women are seen washing clothes and doing household chores in the water. Community events, such as boat races, are held along the canals, and the water is used for irrigation. The canals are not just a source of water but also a source of life, providing a sense of community and a way of life that is unique to Alappuzha.

Boat races, in the morning, are a popular activity for residents, and the water is used for irrigation. The canals are not just a source of water but also a source of life, providing a sense of community and a way of life that is unique to Alappuzha.

## Coastal life of Alleppey Beach

The golden beaches of Alleppey are a major attraction for tourists and residents alike. The water is clear and the sand is soft, making it a perfect spot for sunbathing and swimming. The beach is also a popular spot for water sports and fishing. The water is used for irrigation and the canals are not just a source of water but also a source of life, providing a sense of community and a way of life that is unique to Alappuzha.



The major festival in the 'Mithala Chirappu' which lasts 9 days for the festival, celebrating in big processions, elephants and fireworks.

It uses traditional Kerala temple style, with some unique features like, 'open roamed structure' in some descriptions in this urban context.

Festivals: The major festival in the 'Mithala Chirappu' which lasts 9 days for the festival, celebrating in big processions, elephants and fireworks.

## Daily life and social interactions:

Government facilities: There are a variety of government facilities for locals, providing an affordable way to travel and a great opportunity for tourists to see the backwaters from a local perspective, allowing them to see and interact with the daily life of the region.

Fishing villages: One of the most interesting villages is a small, old fishing village, where women work together to net and dry fish, a staple of the local economy.

Working fields: Working in the fields is a common sight, and the community's daily routine, as residents work the land and take in the water, creating opportunities for friendly interactions with locals.



ALAPPUZHA: A CITY OF CANALS AND WATERFRONT DEVELOPMENT

## Spatial Structure & Connectivity of Nodes

The spatial structure of Alappuzha is based on a dual network of canals and roads. The canals are the main arteries, and the roads are the secondary arteries. The canals are the main arteries, and the roads are the secondary arteries. The canals are the main arteries, and the roads are the secondary arteries.

Alappuzha is a multi-modal urban system, where the canals and roads are the main arteries, and the canals are the main arteries, and the roads are the secondary arteries. The canals are the main arteries, and the roads are the secondary arteries.

Alappuzha is a multi-modal urban system, where the canals and roads are the main arteries, and the canals are the main arteries, and the roads are the secondary arteries. The canals are the main arteries, and the roads are the secondary arteries.

## Spatial Structure: The Dual Network

Street Network Type

Alappuzha is a multi-modal urban system, where the canals and roads are the main arteries, and the canals are the main arteries, and the roads are the secondary arteries. The canals are the main arteries, and the roads are the secondary arteries.

Alappuzha is a multi-modal urban system, where the canals and roads are the main arteries, and the canals are the main arteries, and the roads are the secondary arteries. The canals are the main arteries, and the roads are the secondary arteries.

Alappuzha is a multi-modal urban system, where the canals and roads are the main arteries, and the canals are the main arteries, and the roads are the secondary arteries. The canals are the main arteries, and the roads are the secondary arteries.

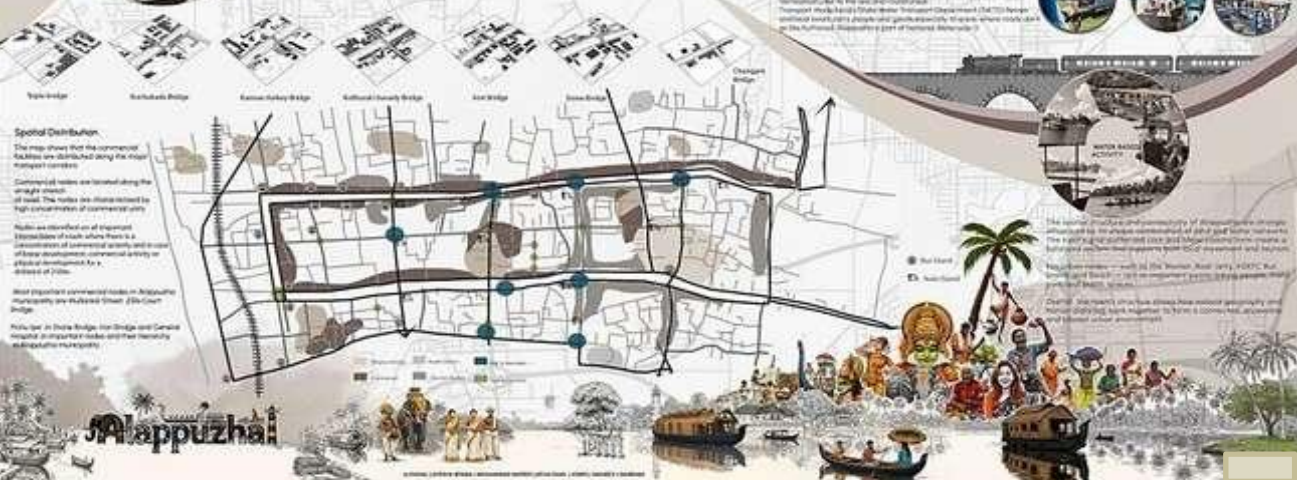
## Connectivity

Alappuzha is a multi-modal urban system, where the canals and roads are the main arteries, and the canals are the main arteries, and the roads are the secondary arteries. The canals are the main arteries, and the roads are the secondary arteries.

Alappuzha is a multi-modal urban system, where the canals and roads are the main arteries, and the canals are the main arteries, and the roads are the secondary arteries. The canals are the main arteries, and the roads are the secondary arteries.

Alappuzha is a multi-modal urban system, where the canals and roads are the main arteries, and the canals are the main arteries, and the roads are the secondary arteries. The canals are the main arteries, and the roads are the secondary arteries.

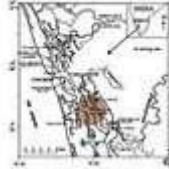
Alappuzha is a multi-modal urban system, where the canals and roads are the main arteries, and the canals are the main arteries, and the roads are the secondary arteries. The canals are the main arteries, and the roads are the secondary arteries.



ALAPPUZHA: A CITY OF CANALS AND WATERFRONT DEVELOPMENT

# HISTORY AND EVOLUTION OF PUBLIC SPACE

The natural backwaters of Alappuzha acted like early urban centers. People came together near these waterways not only to buy and sell goods but also to meet each other and share news. Boats carried raw cane harvested from the fields and spices. These places were not just for trade—they also became centers for browsing, singing, and gatherings, where boatmen, poets, and local people would trade in news and social spaces, shaping the fabric of the region over the centuries.



SINGAM PERIOD 9th CE



Colonial 19th to 21st CE



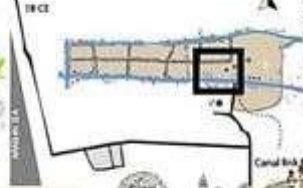
THICKAKKUR 9th CE



Charitable markets and government-run retail and food pathways. This period marked a shift toward organized, permanent, and systematically planned public communities. Areas established by state and private, lower caste and religious, attracted many to their public spaces.

VEMBANAD 13th CE

The Dutch shaped Alappuzha through canals built the backwaters in this area for trade. Workshops and gardens lined these canals, creating open spaces and covered.



During the Venemian era under the Venemian (15th century), Alappuzha was transformed with a planned canal grid, earning it the name 'Venem of the East'. The rice paddy and waterways turned the town into a thriving trade hub, with taverns and markets along canals became active public spaces. Civic buildings, courts, and cultural grounds further enriched the canal banks, making them centers of commerce, governance, and community life.

Architecturally, public spaces evolved around canal edges, boat piers, and markets, integrating natural waterways, channels, and river areas with traditional ways and modern needs. The traditional landscape also became a vibrant public space, where water acted as the main organizing element—linking transport, trade, and daily life.

## Alappuzha



**SOCIAL INFRASTRUCTURE**  
Social infrastructure is the physical and human infrastructure that supports community development and social well-being. It includes public spaces, parks, libraries, and community centers. Public infrastructure is a key element of urban planning, as it shapes the public realm and influences the quality of life for residents.

**NEGLECTED PUBLIC SPACES: LACK OF MAINTENANCE AND KEYNES**  
The public realm is in a state of neglect and has become a source of public concern. Public infrastructure is in a deteriorating condition due to lack of maintenance. The structures are left unused by the community and are in a state of disrepair.

**PUBLIC SPACE TYPOLOGY**  
Public spaces can be categorized into different types based on their location, function, and scale. These include street-level spaces, waterfront spaces, and community spaces. Each type has its own characteristics and requirements for design and maintenance.

**INTERFERENCE**  
Interference in public spaces can occur in various ways, such as through physical barriers, noise, or visual clutter. This can reduce the quality and usability of public spaces. It is important to identify and address these issues to ensure that public spaces remain vibrant and accessible to all.

**CONCLUSION**  
Public spaces are essential for a healthy and vibrant community. They provide a place for social interaction, recreation, and cultural activities. It is important to invest in public infrastructure and ensure that public spaces are well-maintained and accessible to all. This will help to improve the quality of life for residents and create a more inclusive and sustainable urban environment.

## Alappuzha



# PROPOSAL - BOAT TERMINAL

## INTRODUCTION

Our team chose to design a boat terminal to address issues of water grazing, lack of regulation, and urban waste related to tourism and children. The terminal provides a centralized and transparent system for booking and operations, ensuring fair pricing, safety, and a better user experience. In the future, it can evolve into a smart waterfront hub with eco-friendly boats, digital marketing, and improved tourism management, promoting sustainable urban and economic growth.



## SITE STUDY

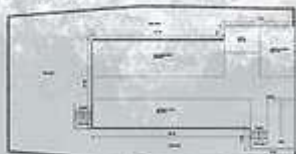
**Soil Type** - Coastal alluvium (silt clay with organic matter)  
**Beating Capacity** - Good to medium (region wide avg.)  
**Flood Risk** - Moderate to high during monsoon  
**Climate** - Semi-arid  
**Wind** - Moderate (predominant SW/North-East)  
**Sea Level** - Variable (Low to High)  
**Drainage Pattern** - Flow towards the sea (local streams)

## SITE ZONING

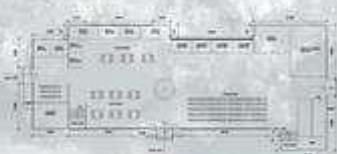


- LEGENDS**
- CAR PARKING
  - BOAT PARKING
  - STAIRWAY BRIDGE
  - WALKWAY AND FENCE
  - INDICAL BOAT DOCK
  - WALKWAY DOCK
  - BRIDGE

## FIRST FLOOR PLAN



## GROUND FLOOR PLAN



## MASTER PLAN



## SECTION B B'



## SECTION A A'



## URBAN HERITAGE OF ALAPPUZZHA

KNOWN AS THE 'VENICE OF THE EAST', ALAPPUZZHA HAS BEEN DESIGNATED AS A PLANNED PORT TOWN UNDER RAJA RAJESWARAN IN THE 14TH CENTURY. IT IS DESCRIBED AS A TRADING HUB FOR COIR, SPICE, AND MARINE PRODUCTS. THE TOWN'S HERITAGE IS A DISTINGUISHING ELEMENT OF ORIGINAL MERCHANT STRUCTURES, INTERCONNECTED WATERWAYS, AND CENTRAL SOCIO-CULTURAL LANDSCAPES.

## MEMORY OF ALAPPUZZHA

'EMBRACE' SHOWN THROUGH FORM, PEOPLE, PLACES, AND HISTORIES COME TOGETHER TO SHAPE A CITY'S IDENTITY.

## IN BRIEF:

ALAPPUZZHA'S URBAN HERITAGE IS ROOTED IN ITS CANALS, MARKETPLACES, TEMPLES, CHURCHES, AND COLONNADA LAMBS. THERE, ITS MEMORY IS CARRIED IN THE RHYTHM OF BACKGROUND LIFE, COIR-WEAVING, FISHING, AND THE BUBBLING NORTHERN OF A WATER-BORN TOWN. THE CENTRAL CHALLENGE TODAY LIES IN RECAPTURING THE SPIRITUAL WHILE NAVIGATING THE PRESSURES OF MODERNIZATION.

# URBAN HERITAGE & MEMORY



Alappuzha

## CONSERVATION POLICIES AND INSTITUTIONAL ROLES

**Alappuzha Heritage Zone**  
Conservation Policy & Institutional Role

**Key Heritage Components**

Physical Assets: Landmarks, canal network, boat heritage zones, etc. (Water, Boat, Boat, Boat, Boat, Boat)

**Legal & Policy Framework**

Heritage  
AMRMA Act 1994 (Amended 2005): Protection areas (Water, Boat, Boat, Boat, Boat, Boat)

1986 Constitutional Amendment: Empowers municipalities for Heritage zoning & regulation.

2002AY Scheme: Supports heritage urban heritage conservation.

State (Heritage)  
Heritage Trust & Country Planning Act, 1996: Heritage (Water, Boat, Boat, Boat, Boat, Boat)

Water Heritage Commission Policy (2005): Local heritage (Water, Boat, Boat, Boat, Boat, Boat)

State Heritage Policy 2001: Focus on heritage & water-based tourism (Water, Boat, Boat, Boat, Boat, Boat)

**Institutional Role**

**Heritage Preservation:**

**Preservation: Local Community Role**

The preservation of heritage necessitates the collaboration of various stakeholders. In addition to local government, non-government organizations, political parties, stakeholders, communities, and the community at large, each contribute actively, ensuring sustainable development while safeguarding cultural legacy.

**Policy**

**Sustainable Development**

**Community-led**

**Local Government**

NGO

Politicians

Policy

**Heritage Preservation**

The ongoing efforts in heritage preservation focus on strengthening institutional capacity and community awareness through local community organizations and community groups.

These efforts aim to promote such high institutional standards that the heritage urban landscape that defines the historic zone.

**Heritage Preservation**

The following entities/institutions such as the Corporation, Ministry of Culture, Department of Archaeology, local municipal authorities, heritage trusts, and local heritage organizations, each contribute towards heritage preservation through institutional, community, and individual efforts, ensuring, and sustainable, and water-based tourism.

**Institutional Framework**

The Government entities/institutions such as the Corporation, Ministry of Culture, Department of Archaeology, local municipal authorities, heritage trusts, and local heritage organizations, each contribute towards heritage preservation through institutional, community, and individual efforts, ensuring, and sustainable, and water-based tourism.

**2025 Conservation Policy Framework**

Key elements of this policy include periodic monitoring, institutional development in heritage projects, incentives for entrepreneurs, public awareness campaigns, and community participation. This is the high-priority of the government, ensuring a satisfactory result, ensuring institutional and community participation for heritage conservation and sustainable development.

**Multi-Level Local Policies**

1. The Ancient Monuments and Archaeological Sites and Remains (AMRMA) Act
2. The 1986 Constitutional Amendment

**State-Level Policies**

1. A State's Town and Country Planning Act
2. The State Heritage Commission Policy
3. The State Heritage Policy

**Municipal-Level Policies**

1. A State's Town and Country Planning Act
2. The 1986 Constitutional Amendment

**Alappuzha**

## Festivals & Rituals as Living Heritage

**Neruvu Trophy Boat Race**

**Event:** The festival of Neriuvu Boat Race held in Alappuzha.

**Location:** Ponnambal

**When:** August/September

**Duration:** 10-15 days

**Key Features:** The festival of Neriuvu Boat Race is held in Alappuzha. It is a traditional festival where the boats are decorated with lights and flowers. The race is held in the canals of Alappuzha. The boats are made of wood and are decorated with lights and flowers. The race is held in the canals of Alappuzha. The boats are made of wood and are decorated with lights and flowers.

**Alappuzha Beach Festival**

**Event:** The Alappuzha Beach Festival is held in Alappuzha.

**Location:** Alappuzha Beach

**When:** December/January

**Duration:** 10-15 days

**Key Features:** The Alappuzha Beach Festival is held in Alappuzha. It is a traditional festival where the beach is decorated with lights and flowers. The festival is held in the canals of Alappuzha. The boats are made of wood and are decorated with lights and flowers.

**Nullakkal Chirappu Festival**

**Event:** The Nullakkal Chirappu Festival is held in Alappuzha.

**Location:** Nullakkal

**When:** November/December

**Duration:** 10-15 days

**Key Features:** The Nullakkal Chirappu Festival is held in Alappuzha. It is a traditional festival where the boats are decorated with lights and flowers. The festival is held in the canals of Alappuzha. The boats are made of wood and are decorated with lights and flowers.

**Mar Sleeva Forane Church Festival**

**Event:** The Mar Sleeva Forane Church Festival is held in Alappuzha.

**Location:** Mar Sleeva Forane Church

**When:** September/October

**Duration:** 10-15 days

**Key Features:** The Mar Sleeva Forane Church Festival is held in Alappuzha. It is a traditional festival where the church is decorated with lights and flowers. The festival is held in the canals of Alappuzha. The boats are made of wood and are decorated with lights and flowers.

**Jain Temple Festival**

**Event:** The Jain Temple Festival is held in Alappuzha.

**Location:** Jain Temple

**When:** August/September

**Duration:** 10-15 days

**Key Features:** The Jain Temple Festival is held in Alappuzha. It is a traditional festival where the temple is decorated with lights and flowers. The festival is held in the canals of Alappuzha. The boats are made of wood and are decorated with lights and flowers.

**Alappuzha**







# "VENICE OF THE EAST"

## Before 1750s

Alappuzha was known as a small town with only a few shops. Here, the Chundan Catamaran and Chundan were the main mode of transport. The British and the Portuguese had established a presence in the region to trade in pepper. The British East India Company and the Portuguese had established the commercial hub and set the stage for Alappuzha's history as a trading hub.

## 1760 - 1800

The construction of the Central Canal through the port in 1760, the British and the Portuguese had established a presence in the region to trade in pepper. The British East India Company and the Portuguese had established the commercial hub and set the stage for Alappuzha's history as a trading hub.

## Evaluation



## 1800 - 1815

The construction of the Central Canal through the port in 1760, the British and the Portuguese had established a presence in the region to trade in pepper. The British East India Company and the Portuguese had established the commercial hub and set the stage for Alappuzha's history as a trading hub.

## Role of the British

The British established a presence in the region to trade in pepper. The British East India Company and the Portuguese had established the commercial hub and set the stage for Alappuzha's history as a trading hub.

### The Port

Alappuzha's history is closely linked to its port. The port was the center of the city's economy and the main mode of transport. The British and the Portuguese had established a presence in the region to trade in pepper. The British East India Company and the Portuguese had established the commercial hub and set the stage for Alappuzha's history as a trading hub.

### Lighthouse

The lighthouse was built in 1852, marking a milestone in the city's history. It was the first lighthouse in the region and was built by the British. The lighthouse was built on a small island in the sea and was used to guide ships in the dark.

### Canal

The canal was built in 1760, marking a milestone in the city's history. It was the first canal in the region and was built by the British. The canal was built to connect the port to the city and was used to transport goods and people.



# Colonial Imprints On the Urban Fabric



## MarketPlace Heritage - Commercial Spine



### MarketPlace Heritage

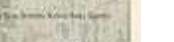
The MarketPlace Heritage is a key element of the city's urban fabric. It is a central area where people come to buy and sell goods. The MarketPlace Heritage is a key element of the city's urban fabric. It is a central area where people come to buy and sell goods.

### Canal

The Canal is a key element of the city's urban fabric. It is a central area where people come to buy and sell goods. The Canal is a key element of the city's urban fabric. It is a central area where people come to buy and sell goods.

### Street

The Street is a key element of the city's urban fabric. It is a central area where people come to buy and sell goods. The Street is a key element of the city's urban fabric. It is a central area where people come to buy and sell goods.



### Street

The Street is a key element of the city's urban fabric. It is a central area where people come to buy and sell goods. The Street is a key element of the city's urban fabric. It is a central area where people come to buy and sell goods.

### Street

The Street is a key element of the city's urban fabric. It is a central area where people come to buy and sell goods. The Street is a key element of the city's urban fabric. It is a central area where people come to buy and sell goods.

### Street

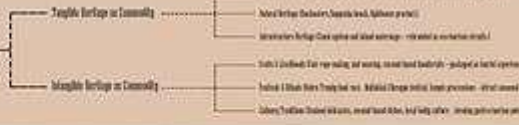
The Street is a key element of the city's urban fabric. It is a central area where people come to buy and sell goods. The Street is a key element of the city's urban fabric. It is a central area where people come to buy and sell goods.



# Alappuzha

# ALAPPUZZHA TOURISM & HERITAGE COMMODIFICATION

VOICE OF THE EAST



### VOICE OF THE EAST

**Economic & Social Role**

Alappuzha is a coastal town in Kerala, India, known for its tourism and heritage. It is a major center for the boat race and the temple festival. The town is also known for its lighthouse and museum. The town is a major center for the boat race and the temple festival. The town is also known for its lighthouse and museum.

Alappuzha is a coastal town in Kerala, India, known for its tourism and heritage. It is a major center for the boat race and the temple festival. The town is also known for its lighthouse and museum. The town is a major center for the boat race and the temple festival. The town is also known for its lighthouse and museum.

## CHURCHES & SHRINES

Alappuzha is a coastal town in Kerala, India, known for its tourism and heritage. It is a major center for the boat race and the temple festival. The town is also known for its lighthouse and museum. The town is a major center for the boat race and the temple festival. The town is also known for its lighthouse and museum.

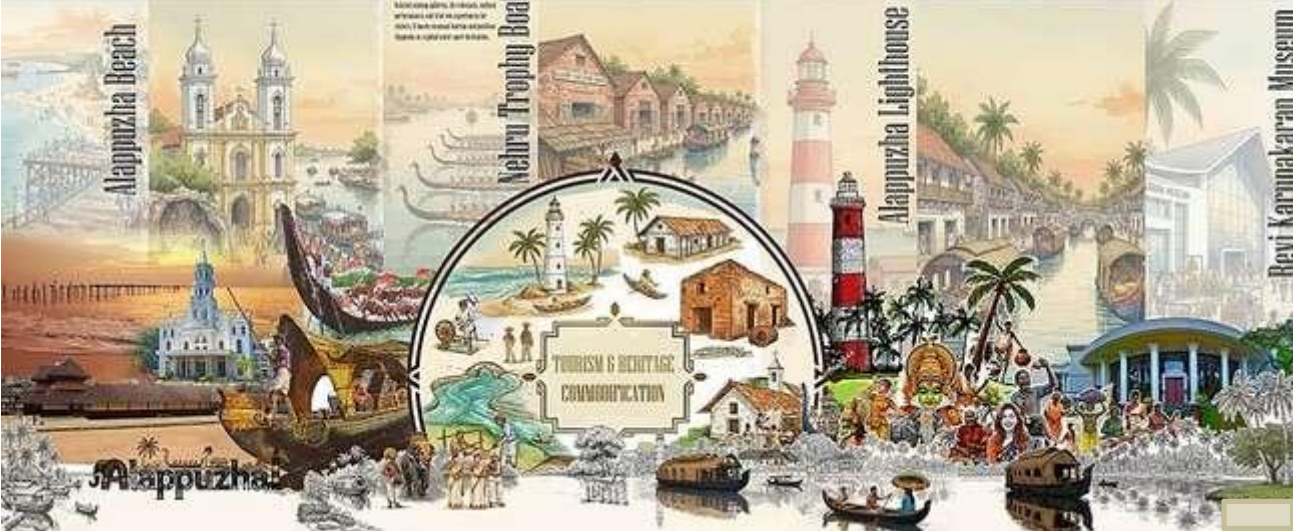
## COIR WAREHOUSES

Alappuzha is a coastal town in Kerala, India, known for its tourism and heritage. It is a major center for the boat race and the temple festival. The town is also known for its lighthouse and museum. The town is a major center for the boat race and the temple festival. The town is also known for its lighthouse and museum.

## COMMERCIAL CANAL

Alappuzha is a coastal town in Kerala, India, known for its tourism and heritage. It is a major center for the boat race and the temple festival. The town is also known for its lighthouse and museum. The town is a major center for the boat race and the temple festival. The town is also known for its lighthouse and museum.

Alappuzha is a coastal town in Kerala, India, known for its tourism and heritage. It is a major center for the boat race and the temple festival. The town is also known for its lighthouse and museum. The town is a major center for the boat race and the temple festival. The town is also known for its lighthouse and museum.



# SEASONAL MOBILITY VARIATIONS DUE TO MONSOON



### SEASONAL THIRST INDEX

Traditional boat race festivals

- Alappuzha Boat Race
- Alappuzha Temple Festival
- Alappuzha Festival

The most common of these events, held in August, features long, narrow boats racing on the backwaters during the monsoon festival.

### TRANSPORT DEMAND VARIABILITY

Highly variable difference in the usage of transport

- regular transport services in tourist and seasonal public places such as
- government buses
- taxi and private vehicles
- private government buses

### INFRASTRUCTURE RESILIENCE

Highly variable difference in the usage of transport

Highly variable difference in the usage of transport

### ADAPTATION MEASURES

Highly variable difference in the usage of transport

Highly variable difference in the usage of transport

### EMERGENCY RESPONSE SYSTEM

Highly variable difference in the usage of transport

Highly variable difference in the usage of transport

### MONSOON IMPACT ON MOBILITY

Highly variable difference in the usage of transport

Highly variable difference in the usage of transport

### BOAT RACE FESTIVAL DURING MONSOON

Highly variable difference in the usage of transport

Highly variable difference in the usage of transport

Alappuzha

# PLANNING & TRANSPORT PLANNING NETWORK

## ALAPPUZHA

### RECLAMATION WORK

**WATER PROVISION FOR THE RECLAMATION**

**ROAD RECLAMATION STRATEGY FOR THE URBAN CORE**

**URBAN RECLAMATION WORKS**

**DEVELOPMENT**

# ROAD NETWORK ECONOMY AND SOCIAL ACTIVITIES

## ALAPPUZHA

**1. URBAN CORE**

**2. URBAN CORE**

**3. URBAN CORE**

**4. URBAN CORE**

**ALAPPUZHA**



# WATER TERMINALS AND NETWORKS

**INTRODUCTION**  
 According to the 'State of the World' report, it is predicted that water will be a major global challenge in the 21st century. The world's population is projected to reach 9.6 billion by 2050, and water demand is expected to increase by 55% by 2030. This infographic explores the challenges of water terminals and networks, and the role of water in sustainable development.

**FACTORS OF TERMINALS**

- Water Quality: Clean water is essential for drinking, agriculture, and industry. Contaminated water can lead to health issues and environmental damage.
- Water Quantity: Sufficient water supply is needed to support economic activities and maintain ecosystems.
- Water Access: Equitable access to water is crucial for social justice and poverty reduction.
- Water Security: Reliable water supply is necessary for food security and energy production.
- Water Governance: Effective water management requires strong institutions and policies.

**KEY TERMINALS**

- 1. Water Treatment Plants (WTPs)**  
 WTPs are facilities that remove contaminants from water to make it safe for drinking. They use various processes like filtration, coagulation, and disinfection.
- 2. Water Supply and Distribution Networks**  
 These networks transport water from WTPs to homes, businesses, and public facilities. They consist of pipes, pumps, and storage tanks.
- 3. Water Recycling Plants**  
 These plants treat wastewater to reuse it for irrigation, industrial processes, or even drinking water. This helps conserve freshwater resources.

**WATER NETWORKS CHALLENGES**

- 1. Aging Infrastructure**  
 Many water networks are old and prone to leaks, which wastes water and increases costs.
- 2. Limited Funding**  
 Insufficient investment in water infrastructure hinders modernization and expansion.
- 3. Climate Change**  
 Changing weather patterns affect water availability and increase the risk of droughts and floods.
- 4. Pollution**  
 Industrial and agricultural runoff contaminates water sources, affecting network efficiency.

**WATER INFRASTRUCTURE**

- 1. Dams and Reservoirs**  
 These structures store water for use during dry periods and generate hydroelectric power.
- 2. Pipelines**  
 Long-distance pipelines transport water from source areas to distant regions.
- 3. Wastewater Treatment Plants (WWTPs)**  
 These facilities clean used water before it is discharged back into the environment.
- 4. Desalination Plants**  
 These plants remove salt from seawater to provide a source of fresh water in arid regions.

**WATER OPPORTUNITIES**

- 1. Smart Water Meters**  
 These devices monitor water usage in real-time, helping consumers and utilities conserve water.
- 2. Rainwater Harvesting**  
 Collecting and storing rainwater for later use reduces dependence on municipal water supplies.
- 3. Water Recycling**  
 Reusing water for non-potable purposes like irrigation and industrial processes saves significant amounts of water.

**CHALLENGES & SOLUTIONS**

- 1. Water Scarcity**  
 Caused by over-extraction and climate change, it can be addressed through water conservation and improved distribution.
- 2. Pollution**  
 From agricultural runoff and industrial waste, it can be mitigated by stricter regulations and better waste management.
- 3. Aging Infrastructure**  
 Can be replaced with modern, durable materials and smart monitoring systems.
- 4. Climate Change**  
 Requires adaptive strategies like drought-resistant crops and improved water storage.

**Legend:**

- Water Treatment Plant
- Water Supply Network
- Wastewater Treatment Plant
- Desalination Plant
- Dam/Reservoir
- Pipeline
- Water Recycling Plant
- Water Distribution Network
- Water Treatment Plant
- Water Supply Network
- Wastewater Treatment Plant
- Desalination Plant
- Dam/Reservoir
- Pipeline
- Water Recycling Plant
- Water Distribution Network

**Alappuzha**

# CONSTRUCTION CHUNDAN VALLAM

**Introduction**

The making of a chundan vallam is a traditional craft that has been passed down through generations. It is a labor-intensive process that requires skill, patience, and a deep understanding of the materials and techniques used. The chundan vallam is a traditional wooden boat used for fishing and transport in Kerala, India. It is known for its unique design and construction, which allows it to navigate the narrow waterways of the region.

**Tools and Raw Materials**

- Tools:** A variety of hand tools are used in the construction process, including axes, saws, planes, and chisels. These tools are used to shape and join the wooden planks and beams.
- Raw Materials:** The primary materials used are high-quality teak wood, which is known for its durability and resistance to rot. Other materials include coconut oil, which is used to waterproof the boat, and traditional rope made from coir.

**Construction Process:**

- 1. Selection of Wood:** The process begins with the selection of the best quality teak wood. The wood is cut into long, narrow planks and beams.
- 2. Shaping the Planks:** The planks are shaped into the desired form using hand tools. This is a time-consuming process that requires precision and skill.
- 3. Joining the Planks:** The shaped planks are joined together using traditional techniques. This involves using wooden pegs and mortise-and-tenon joints to create a strong, durable structure.
- 4. Waterproofing:** Once the basic structure is in place, the boat is treated with coconut oil to waterproof it. This is essential for the boat to be able to withstand the harsh conditions of the water.
- 5. Finishing Touches:** The final step is to add the finishing touches, such as painting and varnishing. This not only protects the wood but also gives the boat a traditional look.

**Introduction of Chundan Vallam**

The chundan vallam is a traditional wooden boat used for fishing and transport in Kerala, India. It is known for its unique design and construction, which allows it to navigate the narrow waterways of the region. The boat is typically 10-15 meters long and 2-3 meters wide. It has a flat bottom and a pointed prow and stern. The hull is made of teak wood and is waterproofed with coconut oil. The boat is propelled by a single oar and is steered by a long pole.

**Plan of Chundan Vallam**

The plan of the chundan vallam shows its elongated shape and narrow beam. The boat is typically 10-15 meters long and 2-3 meters wide. The hull is made of teak wood and is waterproofed with coconut oil. The boat is propelled by a single oar and is steered by a long pole.

**Section of Chundan Vallam**

The section of the chundan vallam shows its internal structure. The hull is made of teak wood and is waterproofed with coconut oil. The boat is propelled by a single oar and is steered by a long pole. The internal structure consists of a central keel and several ribs that support the hull. The boat is also equipped with a mast and a sail.

**Introduction**

The making of a chundan vallam is a traditional craft that has been passed down through generations. It is a labor-intensive process that requires skill, patience, and a deep understanding of the materials and techniques used. The chundan vallam is a traditional wooden boat used for fishing and transport in Kerala, India. It is known for its unique design and construction, which allows it to navigate the narrow waterways of the region.

**Tools and Raw Materials**

- Tools:** A variety of hand tools are used in the construction process, including axes, saws, planes, and chisels. These tools are used to shape and join the wooden planks and beams.
- Raw Materials:** The primary materials used are high-quality teak wood, which is known for its durability and resistance to rot. Other materials include coconut oil, which is used to waterproof the boat, and traditional rope made from coir.

**Construction Process:**

- 1. Selection of Wood:** The process begins with the selection of the best quality teak wood. The wood is cut into long, narrow planks and beams.
- 2. Shaping the Planks:** The planks are shaped into the desired form using hand tools. This is a time-consuming process that requires precision and skill.
- 3. Joining the Planks:** The shaped planks are joined together using traditional techniques. This involves using wooden pegs and mortise-and-tenon joints to create a strong, durable structure.
- 4. Waterproofing:** Once the basic structure is in place, the boat is treated with coconut oil to waterproof it. This is essential for the boat to be able to withstand the harsh conditions of the water.
- 5. Finishing Touches:** The final step is to add the finishing touches, such as painting and varnishing. This not only protects the wood but also gives the boat a traditional look.

**Introduction of Chundan Vallam**

The chundan vallam is a traditional wooden boat used for fishing and transport in Kerala, India. It is known for its unique design and construction, which allows it to navigate the narrow waterways of the region. The boat is typically 10-15 meters long and 2-3 meters wide. It has a flat bottom and a pointed prow and stern. The hull is made of teak wood and is waterproofed with coconut oil. The boat is propelled by a single oar and is steered by a long pole.

**Plan of Chundan Vallam**

The plan of the chundan vallam shows its elongated shape and narrow beam. The boat is typically 10-15 meters long and 2-3 meters wide. The hull is made of teak wood and is waterproofed with coconut oil. The boat is propelled by a single oar and is steered by a long pole.

**Section of Chundan Vallam**

The section of the chundan vallam shows its internal structure. The hull is made of teak wood and is waterproofed with coconut oil. The boat is propelled by a single oar and is steered by a long pole. The internal structure consists of a central keel and several ribs that support the hull. The boat is also equipped with a mast and a sail.

**Alappuzha**

# URBAN SPRAWL AND DEVELOPMENT

**VENICE**  
A Venetian architectural development that is famous for its grand canals and its traditional gondolas. Venice is known as the 'City of Canals' and is a UNESCO World Heritage Site. It is a unique city built on a lagoon in the Venetian lagoon, with its buildings and streets built on wooden piles driven into the lagoon floor. Venice is famous for its grand canals and its traditional gondolas.



## VENICE OF EAST

Marco Polo (1254-1324)  
A Venetian explorer, trader, and diplomat who traveled across Asia and the Middle East, bringing back stories and goods to Europe. He is famous for his book 'The Description of the World'.



**1912** - **Barry** - Barry...  
The...  
The...  
The...

**1915** - **Bridge & Railway Expansion**  
The...  
The...  
The...



**1917** - **Expansion of the Bridge**  
The...  
The...  
The...



**1914** - **Port of the East**  
The...  
The...  
The...



**1915** - **Shanghai**  
The...  
The...  
The...



**1916** - **Port of the East**  
The...  
The...  
The...

**1917** - **Expansion of the Bridge**  
The...  
The...  
The...

**1918** - **Shanghai**  
The...  
The...  
The...

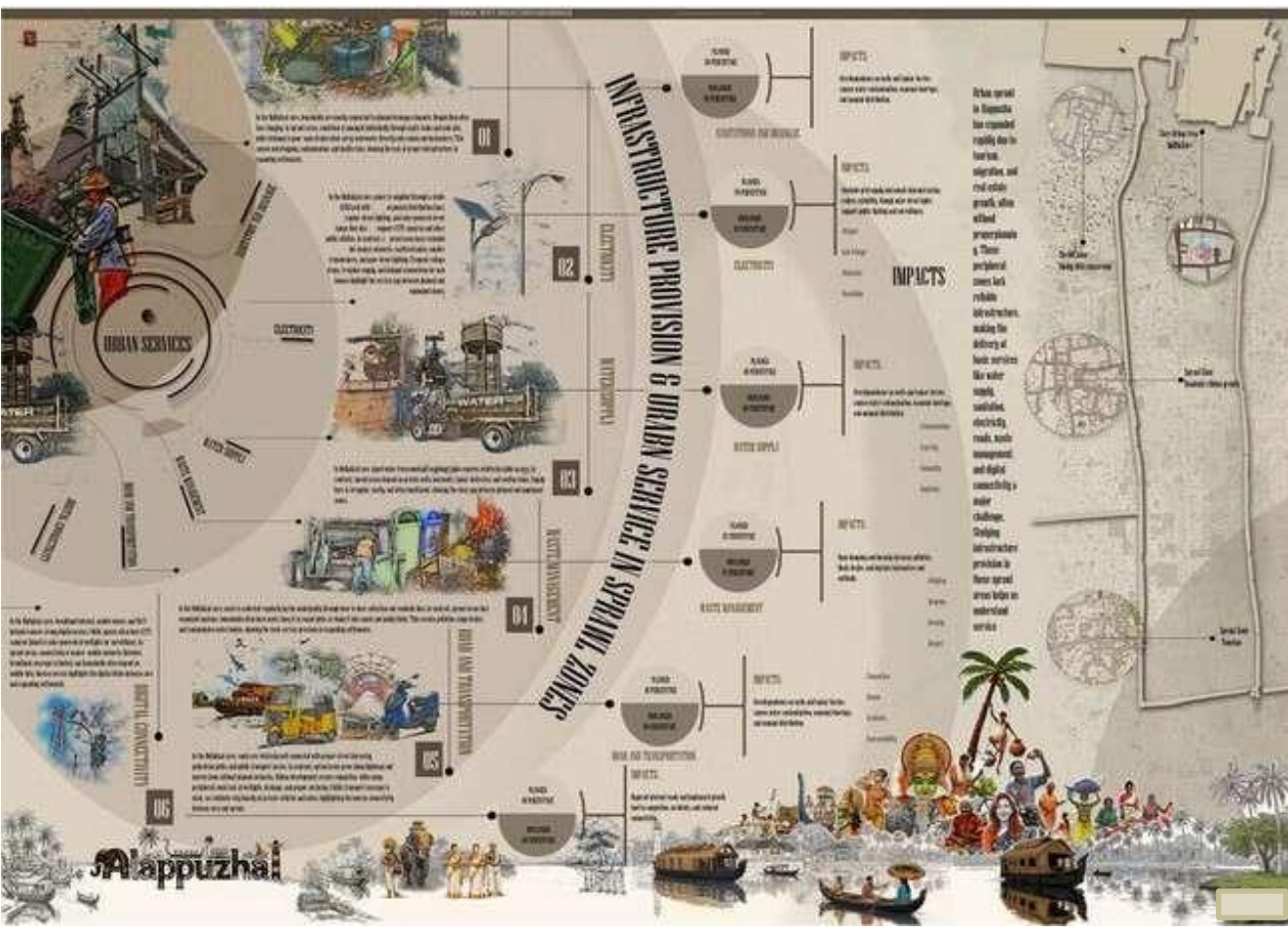
**1919** - **Expansion of the Bridge**  
The...  
The...  
The...

**1920** - **Expansion of the Bridge**  
The...  
The...  
The...



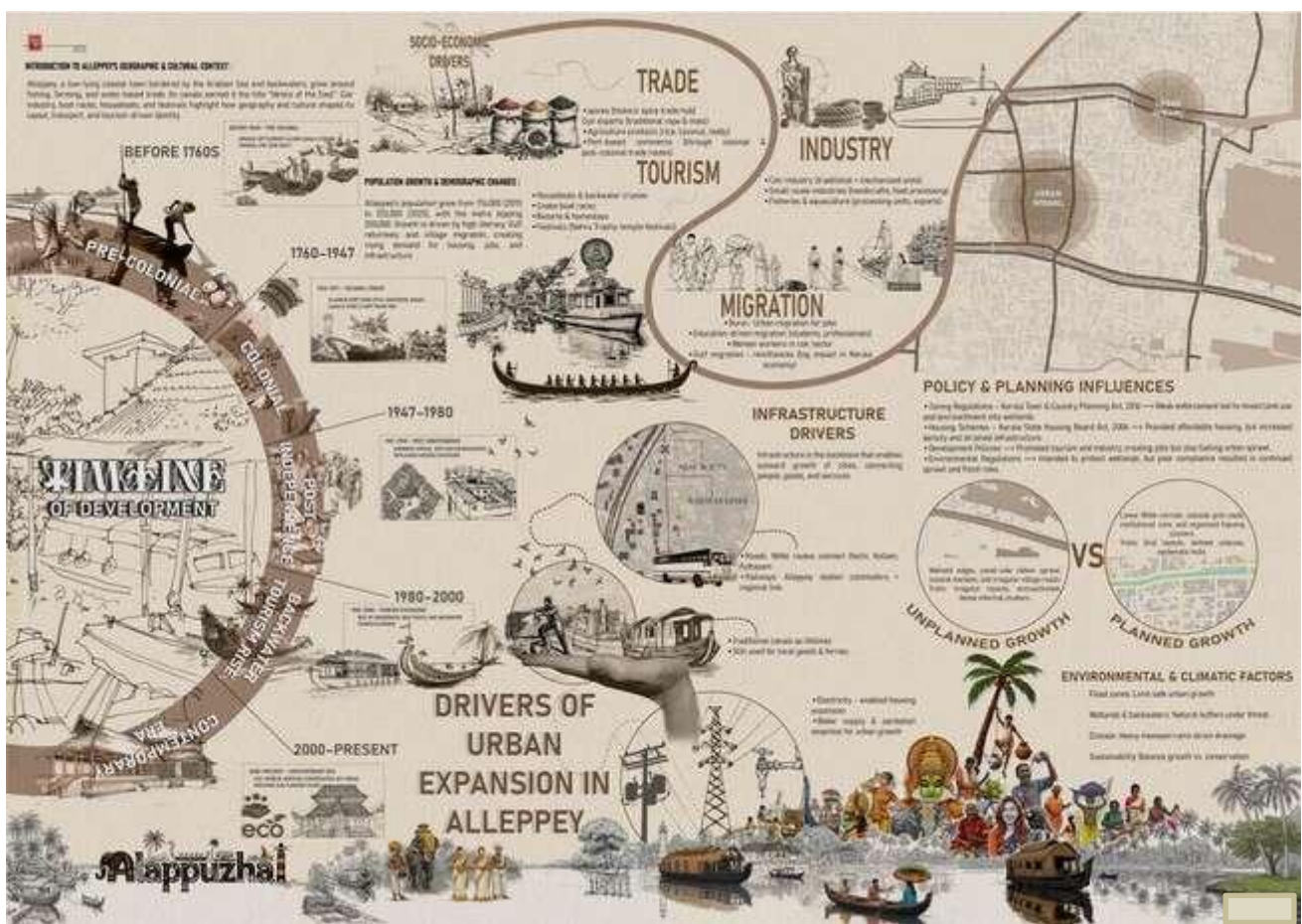
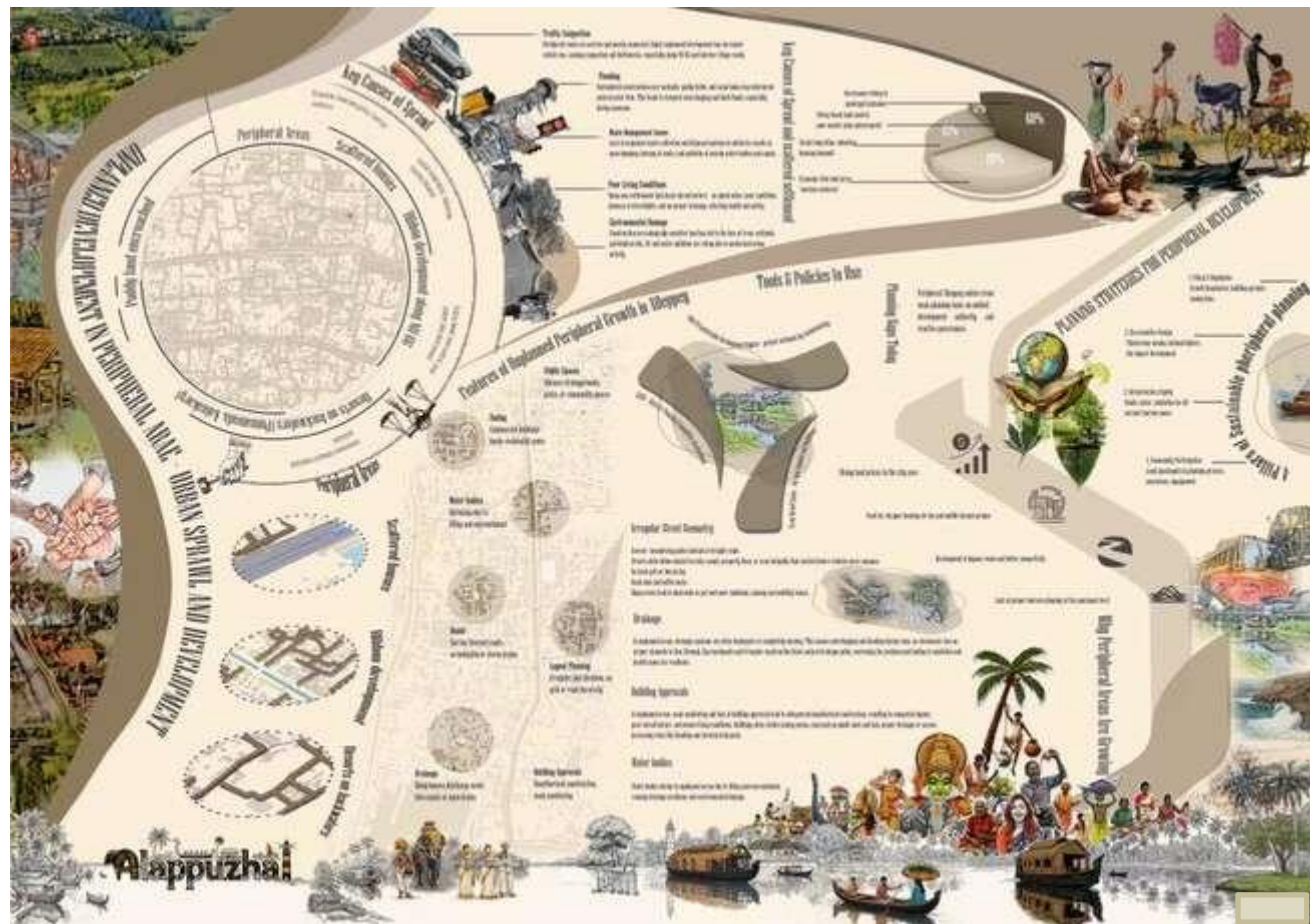
# Alappuzha

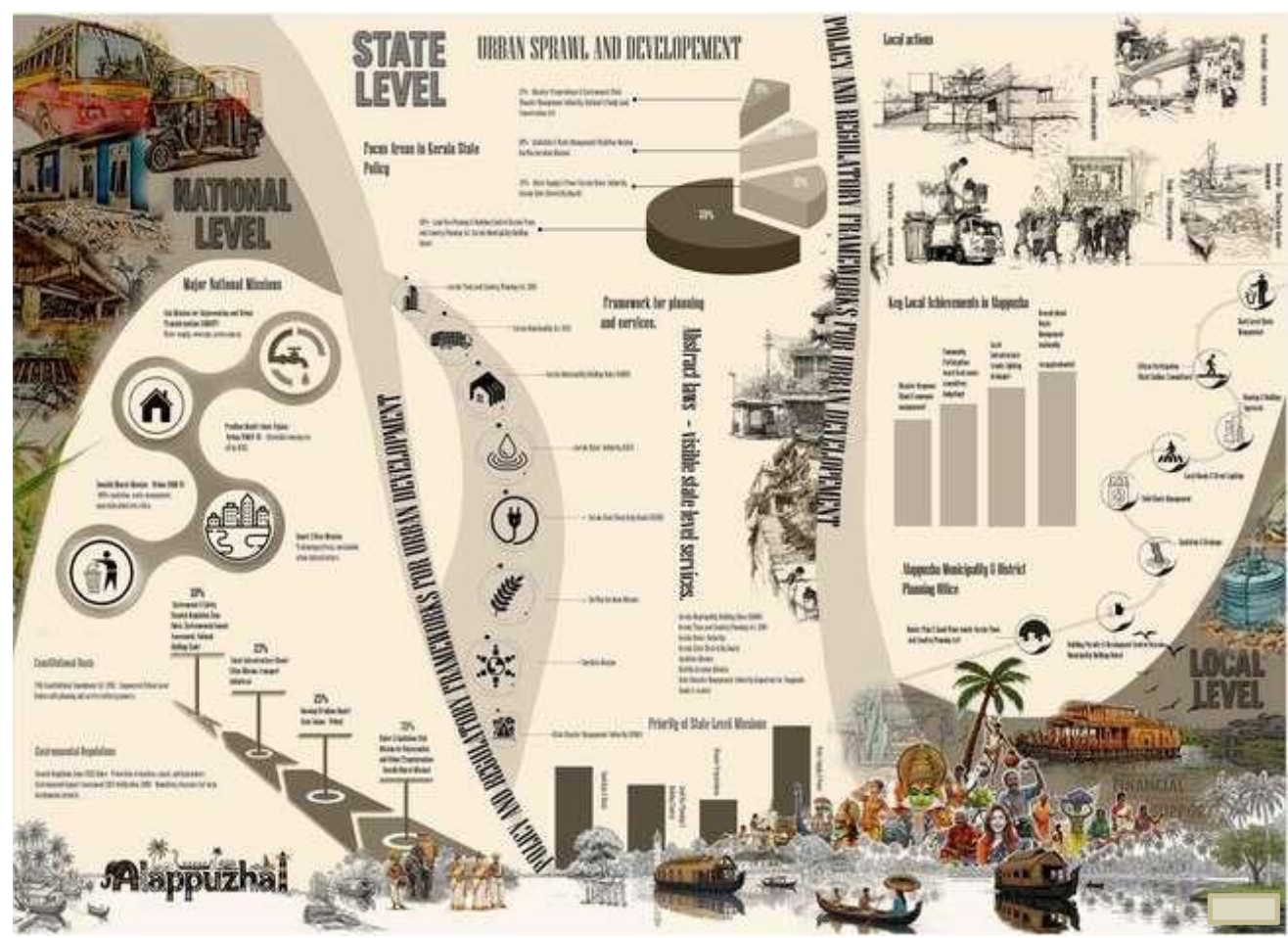
Alappuzha is a coastal city in Kerala, India, known for its backwaters and traditional houseboats. It is a popular tourist destination and is famous for its traditional houseboats and backwaters.



# Alappuzha

Alappuzha is a coastal city in Kerala, India, known for its backwaters and traditional houseboats. It is a popular tourist destination and is famous for its traditional houseboats and backwaters.









**Urban model**





