

# Reclamation of Unassessed Land Confronting the Water Resources The Remnants of Colonial Construction of Natural Resources

Ar. Prasanna Parthasarathy .D<sup>1</sup>, Ar. Pradeep .S<sup>2</sup>, Ar.Sanchana .S<sup>3</sup>,

Ar. Nivedha Raghu .K<sup>4</sup>

<sup>1, 2</sup> Student, <sup>3,4</sup> Assistant Professor

<sup>1, 2, 3, 4</sup> School Of Environment Architecture and Design, SRMIST, Ramapuram, Chennai, India.



Source : Picture from Internet (Pallikaranai marsh)

## ABSTRACT

The concept of unassessed lands in India began during the colonial period and included all the lands that were not cultivated. In the crisis of water in all the regions of the world, taking into consideration the situation of Tamilnadu, water management becomes a major strategy for people. It can be overcome by making use of unassessed land by confronting the water reservoir with an ecological park restoration. In the Zamindari system (landlord), the zamindar claimed to be the owner of the entire area, both cultivated and uncultivated. Modern urban planning, privatization, and land use segregation have both contributed to the fragmentation of landscapes as well as, the separation of unassessed land. Developing a set of design tools and a supportive framework for the development of adaptive design solutions can enhance landscape connectivity with unassessed lands at the land-water edge. By occurring at such edges these design solutions will support ecological functions to enable the integration of unassessed land. The urban spaces / land have been taken into the consideration for the restoration or the manageability of the unassessed lands for the utilization of the recreational areas. Urban common spaces are the common spaces / land that is used by the locals to utilize and urban spaces suggest a community of commoners that actively utilize and upkeep whatever they own in common while public space is an asset usually owned by a local or national authority on behalf of the commons. The unassessed lands were taken under the government control and the rights provided to the local communities were slowly withdrawn, thus alienating the people further. Therefore, giving the rights back to the people and integrating transferability of design interventions can have a larger level of positive impact in transforming these forgotten parts of the city.

**Keywords:** Unassessed lands, adaptivity, city urban context, history, interventions, implementations, Zamindari.

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## I. INTRODUCTION

### A. Poramboke - unassessed land

The term was originally used by the Chola Dynasty for indicating the stretchers of lands which are reserved for shared communal uses which cannot be bought or sold. Poramboke is of two Tamil words - Puram meaning outside and Pokku refers to books of accounts. Thus denotes that these lands are exempt from taxes or revenue generation. Since there is no single ownership, crops are not grown in these lands. The Tamils prided themselves on the richness of their culture, and assigned special purpose for poramboke lands which helped to preserve the region's ecological balance. This included rivers, banks, eris, grazing and pasture lands, koziveli(marshlands), wastelands, wetlands and salt pans.



FIG.1 EXAMPLE OF AN UNASSESSED LAND

Source : Picture from Internet (Pallikarani marsh)

This article includes the poramboke identified and turned into an ecological park and the purposes of them. The ruling dynasties offered these lands for public use as the region suffered from seasonal droughts and unprecedented lands. Thus these lands were widely used for water conservation purposes, many lakes and ponds were built on these lands for varied public uses. Few lands were also used for seasonal cropping to generate revenue for public uses and also used for grazing purposes for the domestic animals.

### B. History of poramboke

While getting ruled under the Government of British the lands of the Madras (now Chennai, Tamilnadu) the uncultivated areas in the village was taken care by the villagers in and around. These were the common property of this proprietary body which were owned by the Zamindari. By cultivating the land with villagers and controlling the land and the property.



FIG. 2 HISTORY IMPACT – ZAMINDARI SYSTEM

Source : Picture from Internet (TOI)

During the rule under the British Government the separation of public and private lands became forward resulting in takeover of the public lands by the Government. The system of land separation part 1858, when the administration of Indian territories passed on from the English East India Company to the British Crown, the colonial administration distinguished between the cultivated and uncultivated lands. These lands did not create revenue to the Government as expected and were also not under cultivation and the uncultivated lands or the public lands which were taken under the control of the Government. Post-Independence the continuation of owning of the public lands remained by the Government.

*C. Poramboke and classification*

The person acts as a solicitor of buyer or seller of property shall have thorough knowledge about the classification of land. By not explaining the brief classification of the poramboke let's have a look with a major land division made for the purpose. The poramboke land is classified into various types according to the use, owner etc.

Agricultural land

Cultivable lands or cultivated lands.

Usable land parcels which are maintained and non maintained.

Naththam lands.

Wherein habitants are situated or simply we can say the term residential site is situated. Naththam is further classified as Gram Naththam, Cheri naththam, Naththam poramboke.

Tharisu nilam or barren land.

Poramboke lands are classified as Eri, Aathu, Vaikkaal, Maeichal, Salai, Samudaya, temple site, Cremation and threshing floor.



FIG. 3 MAPPING OF PUNJA AND NANJA LANDS (CHENNAI)

Source : Picture from Internet (Maraimalai nagar)

*D. Poramboke then to now*

The people became more and more self-centered and lost interest in the elements which were once a major part of the entire society. The dumping of the waste and the sewage disposals by the public and the Government in these poramboke lands were one of the major problems faced from history. Government authorities who had influence in the planning bodies took advantage of this situation and encroached these unassessed lands and constructed illegal developments.

Unassessed lands were, therefore, gradually encroached upon, diminishing its size and modifying its role. Chennai proudly houses education institutions, offices and the industrial complexes on reclaimed lakes, marshlands and creeks. Rivers have turned into sewage drains, tanks have been filled up to accommodate luxury villas and creeks have been reclaimed to house thermal power complexes. Even the city's Airport is built on a portion of the floodplain. These were the major reasons for the city's flood caused every year due to the fair storage of the water. Unfortunately, the meaning of these lands has been modified and perceived negatively by the people and the associated uses of these lands are completely forgotten.

By this all the residents like the old to the youngsters had forgotten about the poramboke importance. Industries and educational institutions can now exchange their patta land for government poramboke/ unassessed land for expanding their existing projects issued by the state government to replace the revenue standing orders (26A). The guidelines were issued in accordance with the recommendations of a five-member committee constituted in 2021. But now the Government has taken some measures to take care the poramboke lands and bring them back to the use with respect to revenue also.

The cities of today with reference context to Chennai city, Tamilnadu stand at crossroads, amidst radical social, economic and technological transformations. A purely consumption based approach to public spaces leaves little room for people to come together over productive activities like producing, growing and decision making. to find more diverse models to apply to the design of urban space, allowing room for gathering and working together in public that lies outside of capitalistic gain.



FIG. 4 EXAMPLE OF AN UNASSESSED LAND

Source : Picture from internet (sale of land)

To conceive and generate innovative public spaces and landscapes that reimagine urban water edge from the lens of ecology.

To reduce the risk of flooding in the future, but also help to improve water conservation and present drought effects and additionally improve the standard of life of the inhabitants, the encroachment and the illegal settlements on the water bodies should be eradicated and the water bodies rather than becoming a common land be put to use efficiently.



FIG. 5 PALLIKARANAI MARSH LAND REMANT SPECIES

Source : Picture from Internet (Pallikaranai eco-park)

E. Mapping and Identification

Identify the common land/ unassessed land site located in Chennai, Tamil Nadu, India. With the help of land maps located in Chennai. With reference taking into the consideration of the lands like Pallikaranai Marsh land and Ennore creek a backwater land as classified by the government.

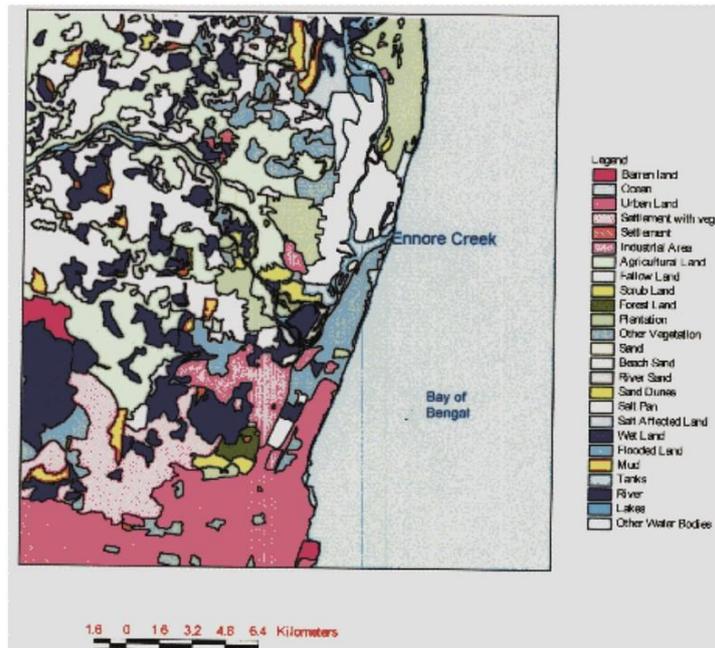


FIG. 6 MAPPING OF UNASSESSED LAND (CHENNAI)

Source : National Institute of Ocean Technology (NIOT)

1. Pallikaranai Marsh land

One of the foremost southern suburbs of India, the Chennai city's largest Kazhiveli. The huge composite floodplain, which one extended from the Indian Institute of Technology campus in Adyar to the Kovalam Creek, has shriveled but 600 acres from its original 6000 acre expanse, a whopping 90 percent destruction of the marsh and related ecosystem over a 50 year period.



FIG.7 REMAINS OF PALLIKARANAI MARSH

Source : Picture from Internet (Pallikarani marsh)

Chennai's flat terrain, functioned as an important floodplain retaining a number of the floodwater before letting all out into the Bay of Bengal via the Buckingham Canal. The land gets connected between two major areas namely, Tambaram and Velachery which were earlier major Eri's of that time. The flood waters are nowhere but inside the office complexes and home to go to. This was evidenced during the 2015 floods where the entire neighborhoods like Velachery, Madipakkam and Keelkattalai along this stretch went under the water

for days together. With this happening by finding out a exact solution and restoring the floodplain with an eco systemed park with water back connecting to the Buckingham Canal.

2. *Ennore Creek - Backwater*

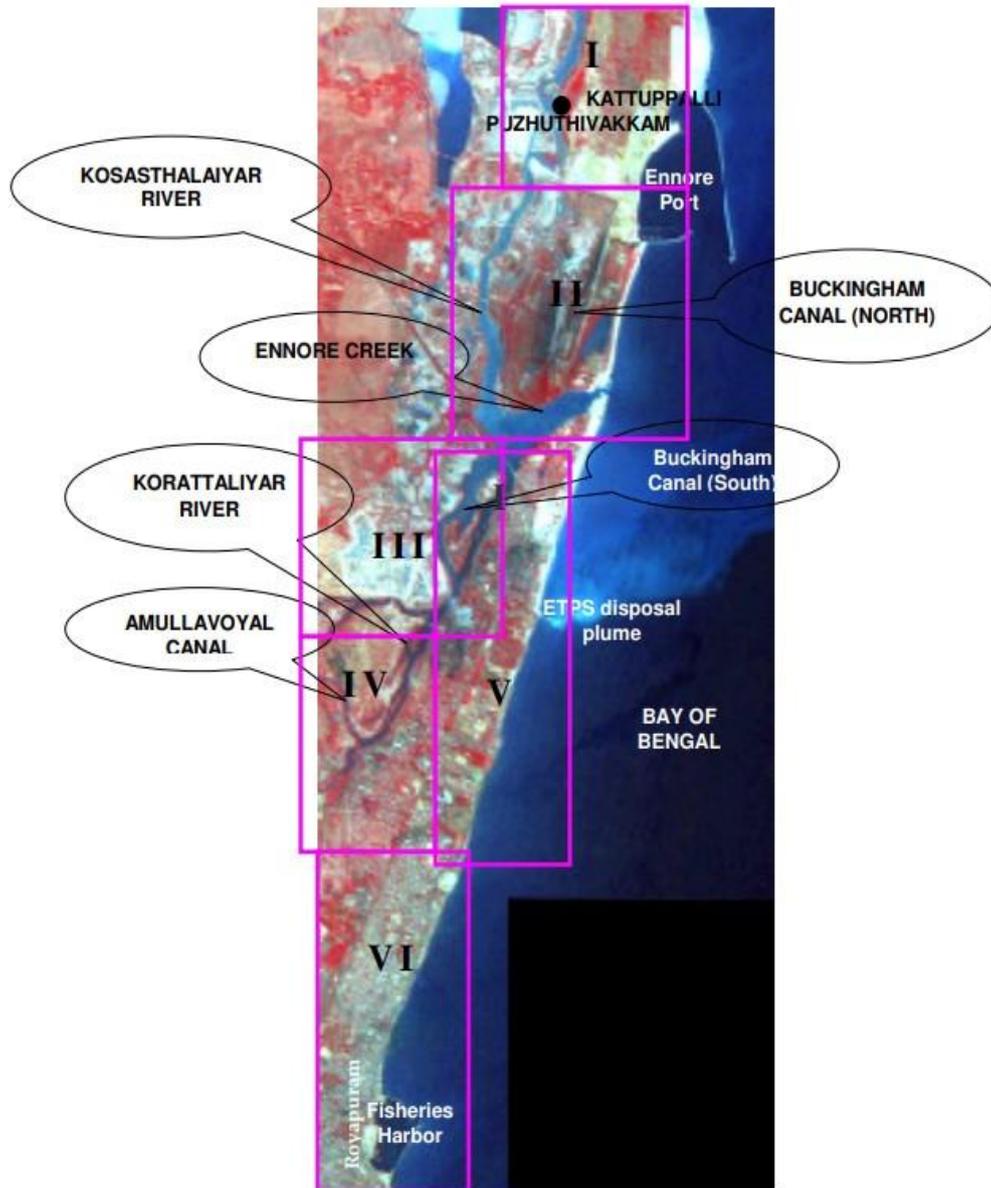


FIG.8 MAPPING OF ENNORE CREEK

Source : National Institute of Ocean Technology (NIOT)

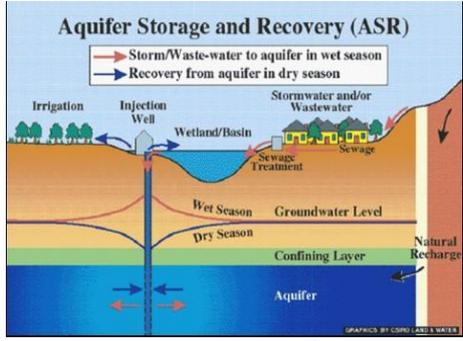
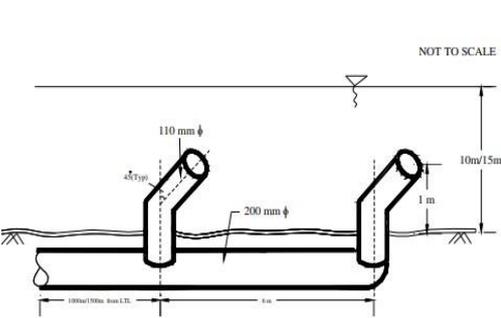
The loss of ecology and livelihood of six fishing hamlets, the Ennore creek and its mangroves are being destroyed by surrounding industries. Kosasthalaiyar River runs for a distance of 136 kms and drains into Ennore Creek and the North Buckingham Canal covers upto 18 kms. Residents of Kattukuppam alleged that encroachments on the Kosasthalaiyar River near the creek by various industries led to the flooding in Athipattu, Manali and Emavoor.

The creek remained as CRZ IV zone according to the coastal zone management plan by the Tamil Nadu State Coastal Zone Management Authority. Undertaking any reclamation, building, construction or altering the natural causes of such water bodies is illegal under the CRZ notification 2011, Water (Prevention and Control of Pollution) Act 1974 and the environment Protection Act, 1986. Despite being protected under such regulations, the unplanned industrial development of this area over the last few decades have had devastating effects on the whole ecosystem, resulting in the loss.

## II. CASE STUDY PROJECTS

| Description                           | Example 1  | Example 2   |
|---------------------------------------|--|---|
| <b>Name</b>                           | <b>Pallikaranai marshland</b>  | <b>Ennore creek</b>   |
| <b>Location</b>                       | Pallikaranai, Chennai.   | Ennore Chennai, along the Coromandel coast of the bay of Bengal.  |
| <b>Why this</b>                       | <p>The marsh was one all told the few natural coastal aquatic habitats that qualify as a wetland in India. This uniquely heterogeneous hydrology and ecology also makes the marsh typify the presence of species. The natural wetland which had the important function of draining an district of 250 kms south chennai.</p> <p>The exact land of restoration of the water reservoir which was previously extruded within the land is now underneath and unmaintained properly or not is utilized or used onlyjust for the segregation of the waste management which is dumped in tonnes from the government of Chennai.</p> | <p>In keeping with the Department of Environment, the zone covers a vicinity of 6,469 acres of the creek identified as a tidal waterbody protected as a No-Development zone under CRZ-I regulations. The soil within the region is of loam and alluvial types. Most of the part consists of tracts of dirt and western region comprises beach dunes, tidal flats and creeks.</p> <p>Moreover the land is mixed with both dirt and a large amount of salt marsh of nearby port. The land is additionally surrounded by mangroves, fishing villages and crop lands.</p> |
| <b>Area</b>                           | Surface Area - <b>80 sq. km</b><br>Water Extent - <b>9 sq. km.</b>   | The zone covers an area of <b>4 sq. km</b> and<br>The creek covers an area of <b>2.25 sq. km.</b>   |
| <b>Visual</b>                         |  <p style="text-align: center;">Source : Picture from Internet</p>   |  <p style="text-align: center;">Source : Picture from Internet</p>   |
| <b>Typology</b>                       | Marshland - untreated base water   | Marshland - sea back water  |
| <b>Biodiversity (Flora and Fauna)</b> | <p><b>Fauna :</b><br/>A Home to 176 species of terrestrial and migratory birds, 10 species of mammals, 21 species of reptiles, 10 species of aquatic organisms, 50 species of fish, nine species of snails and accommodates over 459 living organisms with total of 2,63,313 birds have been identified as of now.</p> <p><b>Flora :</b><br/>About 114 species of plants are found to be in the wetland, including 29 species of grass. These plant species include some exotic, floating vegetation such as water hyacinth and water lettuce.</p>   | <p><b>Fauna :</b><br/>The common fauna were birds of some migrations and 5 to 10 species of reptiles, aquatic organisms.</p> <p><b>Flora :</b><br/>Mostly found 100 species of plants in the wetlands nearby port and with the surrounding of floating vegetation.</p>  |
| <b>Decade before</b>                  | In 1806, the external manipulation of the wetland began with the construction of the 422 kms Buckingham canal. The marsh experienced several construction activities, ranging from the National Institute of Ocean Technology, the Center of Wind energy and MRTS which affected the flow of water. The corporation occupied 200 acres in  | The ennore creek in north chennai disappeared in the early 1980's.Things accelerated in the 2000's when, contrary to laws passed to protect coastal zones, large portions of the wetlands were given over to the ennore port.   |

*Reclamation of Unassessed Land Confronting the Water Resources..*

|                            |  |   |
|----------------------------|--|---|
|                            | <p>which the waste water management plant of about 30 acres, the locals started using the stagnant water in and around the wetland.</p>  |   |
| <b>Government measures</b> | <p>A 2.5-acre ecological park inside the Pallikaranai marsh was opened in December 2021 for ₹ 200 million. The park has a 2-km-long walking trail for bird watching and public green spaces enclosed within a 1,700- meter compound wall. The marshland consists of four watchtowers. These are located on the Thoraipakkam–Pallavaram Radial Road, on the eastern side and the northern side of the marsh.</p>  | <p>In 2000, artificial beach nourishment (to prevent downdrifterosion ) was taken up by placing <math>3.5 \times 10^6</math> m<sup>3</sup> of sand dredged from the Ennore harbor basin and the approach channel through capital dredging.</p>  |
| <b>Actual Condition</b>    | <p>Currently the marsh land has been converted with several pockets of eco-friendly park for the benefits of the society and people. By 2012, the government introduced the project of restoring and conserving the marshland and setting up an eco-friendly park with the benefits of society. Till now there has been a developed eco-friendly park completed.</p>   | <p>Owing to the excessive industrial takeover in the region for many years now the number of fish in the creek declined significantly due to the leakage of toxic waste water from factories and dumping of toxic fly ash.</p>  |
| <b>Picture</b>             |  <p style="text-align: center;">Source : Picture from Internet</p>   |  <p style="text-align: center;">Source : Picture from Internet</p>   |
| <b>Add ons</b>             | <p>By just adding an ecological park in the marsh land of the site, from my side it didn't get implemented to the marsh by adopting it as the restoration of the water underneath didn't go as much as expected to the level of recreating the old marsh. The water management here became the strategy with earlier rise of the water condomination under the land. By acquiring such at the edges, the land can be treated as much as possible with the effects of considering the waste management of biodiversity land with an ecological era.</p> | <p>According to the environment, the zone covers an area of 6,469 of creek identified as a tidal waterbody protected as a no development zone under CRZ-I regulations. The restoration of Ennore Creek also involves dredging for 2 km to 3 km from the mouth to the Ennore railway bridge. The work is proposed to be taken up in two phases under the CRRT project.</p> |
|                            |  <p style="text-align: center;">Source : Picture from Internet</p>  |  <p style="text-align: center;">Source : Picture from Internet</p>  |
| <b>Inference</b>           | <p>Wasteful land into a man's useful park with the urban context within the city to a diverse region.</p>  | <p>The cities all waste transformed into a naturally blended ecological space.</p>  |

Source : From Authors and Pictures from Internet

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