

FROM DETERIORATION TO RESTORATION - THE BUCKINGHAM CANAL

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Abstract: This paper presents the case study about Buckingham canal within the Chennai city limits. The canal is subjected to immense degradation and pollution from a huge amount of domestic and industrial waste entering into it. The restoration of water quality is a major challenge to environmental managers. The study area is divided into 3 parts and identifies the critical pollutants affecting the canal during its course through the city. Solutions are recommended to minimize the critical parameters and make the canal purposeful.

Keywords: Degradation and pollution, restoration of canal, critical parameters, canal purposeful.

1. INTRODUCTION

The Buckingham Canal was once the preferred choice for ferrying goods along coastal Andhra Pradesh Region. It connects most of the natural backwaters along the coast to Chennai (Madras) port. The canal was constructed during British Rule and was an important waterway during the late nineteenth and early twentieth century's. Today it is the most polluted of the three major waterways in the city 55 million litres of untreated sewage being let into it daily, including by the Chennai Metropolitan Water Supply and the Sewerage Board. The canal on its course is connected to the Adyar and Cooum river. The untreated sewage gets into these rivers.

The Cooum River connects the canal to the Bay of Bengal in the center of Chennai, Tamilnadu, India. The rest is let out by the residents living along the banks and even by government agencies. An ambitious plan to not only restore the past glory but also extend its course is now afoot.

2. HISTORY AND FACTS ABOUT THE CANAL

The first segment of the canal was a saltwater navigation canal, constructed in 1806. The further extension of canal was carried under the governance of Madras presidency in 1837. When the canal was opened, it was named Lord Clive's Canal and later Buckingham Canal in 1878 on the order of Duke of Bunkingham and Chandos.

The following table enlists the various facts about the canal.

Length	1095 KM (Second Longest in India)
Starting	Kakinada in Andhra Pradesh
Ending	Pondicherry
Width: Surveyed	
Maximum	143 Mtr (St Marys Road – Agraharam Road- Swami Vivekananda Salai)

Minimum	42 Mtr (Wallaja Road – Swami Vivekananda Salai)
Existing	
Maximum	48 Mtr (Kamaraj Salai – Venkatakrishna Road)
Minimum	24 Mtr (Besant Road – Barathi Salai)
Number of Terminals	15
Owner	Inland Water Authority of India
Operator	Central Inland Water Transport Corporation
Earlier Name	Cochrane's Canal

3. REASONS FOR THE DETERIORATION OF THE CANAL

The canal which was used earlier to move goods up and down along the coast from Vijayawada was severely affected by the cyclones of 1965/1966 and 1976 destroyed the canal and was no longer taken care by any authority. Within the city of Chennai the canal is badly polluted from industrial and sewage waste, as well as the silting up of the canal which left the water stagnant, made the canal a well suited breeding ground for mosquitoes. At the time of 2004 Indian Ocean Tsunami the canal functioned as a buffer zone and the coast of the canal was filled with tsunami water which overflowed in certain areas. Piles of garbage have reduced the width of the canal. The illegal encroachments of areas along the canal have also contributed to its degradation.

4. NECESSITY TO RESTORE THE CANAL

Being an inland water way the canal can serve as the cheapest means of transport among other methods of transportation. The canal will help in moving more cargo in the same time than the rail or road transport from one place to other. It can replace the limitations in comparison to other means of transportation system. As per survey the Indian freight movement in comparison to all the transportation system, around 67% of cargo is being shipped by roadways, 27% by rail transport, and just 0.5% by waterways, though waterways transportation system is supportive in all the ways. The canal can also act as an ecofriendly means of transportation system. The risk of accidents in this form of transport can be minimized as the canal can play a major role in reducing traffic by removing the number of railcars, trucks on the road that could block heavy traffic. The canal can provide a number of jobs like port crews and tugboat crews are a few jobs that are available because of the inland river system. The increase in the number jobs will give a good boost to our economy and will keep the business afloat.

5. HOW TO REJUVENATE THE CANAL?

- Stop urban runoff through roads and public places. Most of the roads in urban areas are maintained by local highway authorities. It is a main source of sediment deposited in water bodies.
- Misconnection of drainages contributes sewage into the canal. Identify and repair them cost effectively. Develop a strategy to tackle the effect of poorly maintained septic tanks.
- Organize campaigns and meetings to create awareness among the people on the need to restore the past glory of the canal.
- Plant more trees along the banks of the canal to prevent the surface runoff.
- Proper and periodic dredging has to be carried out to ensure that sufficient depth is maintained especially in areas where silting occur frequently.
- Government should emphasize the rules and regulations to safeguard the health of the canal. They should prohibit illegal encroachment of land near the canal. Factories and other industries should not be constructed within the proximity of the canal.

6. CONCLUSION

Buckingham canal was a part of the transportation system of India from a long time. For the past few decades the canal is in the course of destruction. So it's our duty to safeguard the canal and restore its heritage as we also get benefitted by the canal. We believe our suggestions would help to rejuvenate the Buckingham canal.

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