

# ECOLOGICAL STUDY REPORT ON MUSI RIVER

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**Abstract:** *It is the tributary of Krishna River in the Deccan Plateau which flows through the state of Telangana. It was known as Muchukunda River in earlier days. Hyderabad stands on the bank of this river which divides the city between the old and the new. The river originates in Ananthagiri Hills near Vikarabad. The Purana Pul is the oldest bridge over the river in Hyderabad. Himayat Sagar and Osman Sagar are the two dams which are constructed over the river. It rises in the Ananthagiri hill in Ranga Reddy district. Vikarabad is the birthplace of Musi. The Purana Pul was constructed in 1579 A.D.during the reign of Ibrahim Qutub Shah. On 28 September 908, Musi River was the reason for the devastating floods in Hyderabad.*

**Key words:** Musi River, Pollution, Floods, Degradation

## **Introduction:**

There is hardly any water flowing into the Musi. The water flows downstream very quickly during rainy seasons. Water can be seen only at the kath was or at the reservoir at Suryapet. Whatever the water that is found in the riverbed in the form of a small stream is actually the sewage /drainage from Hyderabad city. Large parts of the urban area do not have underground sewer systems. Either the settlements have septic tanks which are not the preferred system of disposal from a long term perspective or the sewer lines are combined with the storm water lines. Thus many natural storm water drains have been actually carrying domestic sewage into the river. Several villages downstream of the city along the Musi irrigate their fields with the water (ie. a cocktail of industrial effluents plus domestic sewage) from Musi river. Such “water” is diverted from the kathwas into the village irrigation tanks which in turn is used for cultivating crops. Several such village tanks are perennial in nature i.e. they are never dry due to the regular flow of the cocktail from Hyderabad. Underground water in such villages is polluted beyond acceptable standards. People from several such villages travel as much as 10-15 km to reach the outskirts of Hyderabad city to collect drinking water in plastic cans.



Fig-1

**Current Situation:**

The river has become a dumping site for domestic and industrial waste because of lack of planning and impartial urbanization. It was once the mighty river which has become a dumping giant now. The river is dying a slow death affecting the health of the citizens. As it passes through Hyderabad, it converts into a giant sewer. Years of neglect has made the river to come among the most polluted rivers in the country. Crores of Rupees has been spent for treating it but no progress has been seen.



Fig-2



Fig-3

## Pollution caused by the River to the nearby Citizens:-

The polluted water cause the water pollution as sometimes it makes the drinking water stagnant. Due to the over dumping of garbage and industrial wastes into the river makes the river water polluted. Due to indiscriminate urbanization and lack of planning, the river has become a receptacle of untreated domestic and industrial waste dumping out of Hyderabad. It is estimated that nearly 350 MLD (million liters a day) of polluted water and sewage originating from Hyderabad and Secunderabad flow into the river. Efforts to clean it have failed. The river water downstream of the cities remains highly polluted, considered a major disaster in Hyderabad.



Fig-4

## Flora & Fauna Seen in the River:

Mostly seen fauna are the wild Dogs, Pigs and Buffaloes, which pollute the river water even more. There is no aquatic life as it is said by the GHMC members that “If it was clean water that was stagnant, there would be no problem. There is no aquatic life here .Now the water stagnates at multiple locations and it has become a breeding ground for mosquito’s .Where as in case of flora there are only wild plants which are seen over here and few migratory birds are seen.



Fig-5

## Flood Devastation:

The Musi River was the cause of frequent flood devastation of Hyderabad city until the early decades of the 20th century. On Tuesday 28 September 1908, Hyderabad witnessed disastrous floods of the River Musi, flowing through the city. In one day, 17 inches of rainfall was recorded and the water level at Afzalgunj was about 11 feet (3.4 m) high. These floods caused huge devastation to Hyderabad and killed around 15,000 people.

The modern era of the development of the twin cities began soon after these floods in 1908. This necessitated planned, phased development.



Fig-6



## Damages due to Floods:

The **Great Musi Flood** was a devastating flood that occurred on 28 September 1908 in the Hyderabad state capital on the banks of Musi river. The flood, locally known as *Thughyani Sitambar*, shattered the life of the people living in Hyderabad, killing 50,000 people. It washed away three bridges — the Afzal, Mussallam Jung and Chaderghat — the Puranapul became the only link between two parts of the city.

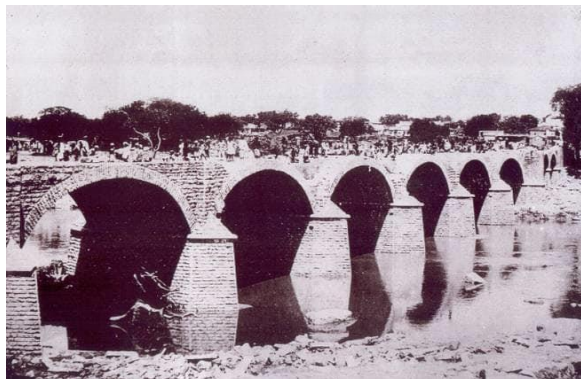


Fig-7

## **Present Condition:**

It is not known exactly when Musi dried up as a river. But interviews with people and information collected from secondary sources indicate four major reasons which have led to no water flowing in Musi:

1. Degradation of the catchment of Musi in the upstream in Viakarabad area.
2. Impounding of water by the Osmansagar and Himayatsagar, and degradation of their immediate catchment areas.
3. Changes in the drainage pattern of Hyderabad urban region affecting free flow of water into the Musi from various directions.
4. Disruption of the interlinkages of the numerous water tanks in the region (numbering more than 1000) and their encroachments overtime, which were otherwise feeding the river.

## **Beautification / Conservation of Musi River:**

Any development or redevelopment plan for Musi affects a number of people/stakeholders especially related to housing, livelihoods, and physical environment. Implementation of most of the plans prepared or being undertaken would involve eviction of people living within the banks of Musi (owners and squatters), and also those living on the banks (owners and squatters). This leads to displacement of houses which affects the work and livelihoods. It is, therefore, important to understand the ground level situation and have a consultative process for planning and implementation. Any physical intervention also has to take care of the heritage of Musi River, its embankments and the various structures located around it. There are heritage regulations which give guidelines for development and in some cases restrict development. Conserving Musi and restoring its past glory would also involve extensive heritage conservation.

## **Dicussion:**

As the city of Hyderabad has grown in size and is emerging as a global megacity, its water resources have been neglected to the detriment of long-term water security of the people. With the old sources declining and the demand for water growing, the city is drawing water from longer distances. The Musi River has been reduced to a sewer drain carrying the domestic and industrial waste generated in Hyderabad city. This had an adverse impact on the river ecology and the villages in the downstream of the river.

## **Conclusion:**

The future water security of Hyderabad city lies in an integrated management of the entire catchment area of the Musi River and a number of water bodies that still exist in and around the city.

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