

"All Flooded Out"

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All Flooded Out

Every rainy season, Chennai is flooded. Some of its streets get inundated even after a single spell. The maps show that as the need for residential units grows, houses were built in low-lying areas and floodplains, leading to stagnation. The loss of a portion of the Pallikarai marshland added to the crisis. Moreover, many missing links of stormwater drains, even along major roads, led to frequent stagnation. **By Vignesh Radhakrishnan & Raj Bhagat Palanisamy***

Flat terrain
The city sits on a coastal plain. Areas that are relatively flat and level to road levels, some low-lying areas, are not suitable for building. The water doesn't get a chance to drain, leading to frequent stagnation.

Land of lakes
Before the marshland was redeveloped into a large, built-up area, it was a vast expanse of water. Thousands of lakes in and around the city, which were used for irrigation, were destroyed. The smaller areas that had been used for irrigation were converted into housing, leading to stagnation. Also, these lakes can't be used as flood buffers and so, when it rains, the water doesn't have anywhere to go.

Rampant urbanisation
The map on the right shows the built-up areas of Chennai and its surrounding areas. The built-up areas are shown in red and orange. The map shows that as the need for residential units grows, houses were built in low-lying areas and floodplains, leading to stagnation. The loss of a portion of the Pallikarai marshland added to the crisis. Moreover, many missing links of stormwater drains, even along major roads, led to frequent stagnation.

ADYAR
Near the river
One of the major roads along the city is the Adyar. The city is built on the banks of the Adyar. The map shows that as the need for residential units grows, houses were built in low-lying areas and floodplains, leading to stagnation. The loss of a portion of the Pallikarai marshland added to the crisis. Moreover, many missing links of stormwater drains, even along major roads, led to frequent stagnation.

2007

2020

Areas along Adyar flooded in 2020

Repeated flooding in Adyar
The Adyar is one of the major roads in Chennai. The map shows that as the need for residential units grows, houses were built in low-lying areas and floodplains, leading to stagnation. The loss of a portion of the Pallikarai marshland added to the crisis. Moreover, many missing links of stormwater drains, even along major roads, led to frequent stagnation.

PALLIKARANAI
Building on marshland
The Pallikarai marshland was a vast expanse of water. The map shows that as the need for residential units grows, houses were built in low-lying areas and floodplains, leading to stagnation. The loss of a portion of the Pallikarai marshland added to the crisis. Moreover, many missing links of stormwater drains, even along major roads, led to frequent stagnation.

1990

2018

MISSING LINKS
Lack of stormwater drains
The map shows that as the need for residential units grows, houses were built in low-lying areas and floodplains, leading to stagnation. The loss of a portion of the Pallikarai marshland added to the crisis. Moreover, many missing links of stormwater drains, even along major roads, led to frequent stagnation.

Waterworld
A look at various projects for much of Chennai having gone under water during the 2021 northeast monsoon.

Notable roads and missing links

Mixing maps

The way forward

News Item in The Hindu newspaper, Chennai Edition dated 28th November 2021

From urbanisation to missing links of stormwater drains, the maps tell it all.

Every rainy season, Chennai is flooded. Some of its streets get inundated even after a single spell. The maps show that as the need for residential units grew, houses were built in low-lying areas and floodplains, leading to stagnation. The loss of a portion of the Pallikaranai marshland added to the crisis. Moreover, many missing links of stormwater drains, even along major roads, led to frequent stagnation.

Flat terrain

Chennai lies in a relatively flatter terrain and is close to sea level in most places. Some localities are in relatively low-lying areas, so the water doesn't get drained quickly, leading to flooded streets.

Land of lakes

Before the rampant increase in residential units began, bunds were constructed to store water and irrigate farms, forming thousands of lakes in and around the city, as shown on the map. However, once the farms were sold, the lakes lost their original purpose. The smaller drains that fed these lakes got closed. Such drains are crucial during floods as they aid the excess flow of water. Also, these lakes can be used as flood buffer and to temporarily store and clean sewage. However, they are not being repurposed for such uses.

Rampant urbanisation

The map shows the built-up area of Chennai and its immediate surroundings by 1990 , by 2000 , by 2010 , and by 2015. It can be observed that until 1990, the built-up area mostly stayed clear of water bodies and rivers. However, the later constructions came up increasingly closer to waterbodies and in low-lying areas, leading to stagnation after a rainy spell.