



Marina Barrage: A Singapore Success Story

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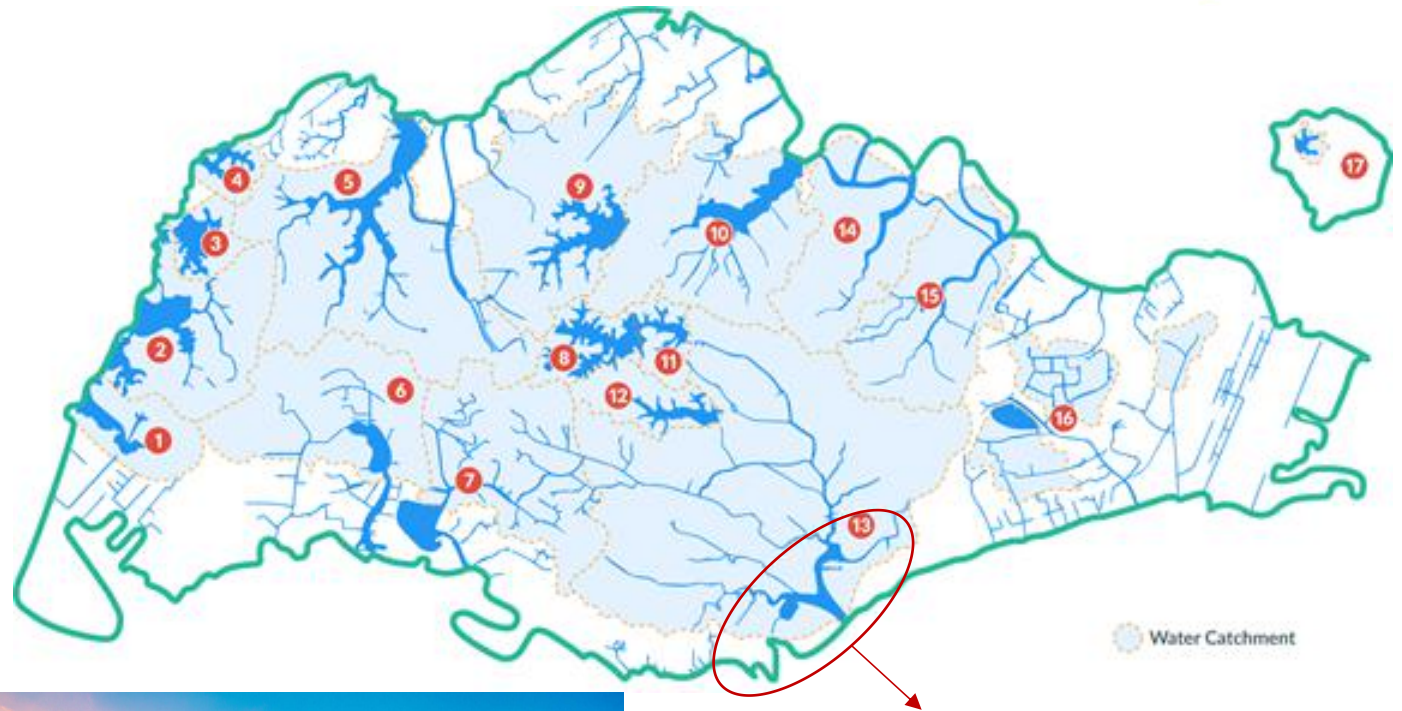
The 1st China-ASEAN Dam Science Popularization Contest

1. Overview

Name: Marina Barrage (Dam)

Location: Marina Reservoir, the heart of City

History:
the vision of Mr Lee Kuan Yew more than two decades ago and it was officially opened on 31 Oct 2008 by Mr Lee Hsien Loong



2. Threefold Benefits

2.1 Water Supply

Marina Barrage is a dam built across the 350-metre-wide Marina Channel to keep out seawater, creating the 15th reservoir in downtown Singapore. Water from Local Catchment is one of the Four National Taps, with the other three being imported water, NEWater and desalinated water.



2. Threefold Benefits

2.2 Flood Control

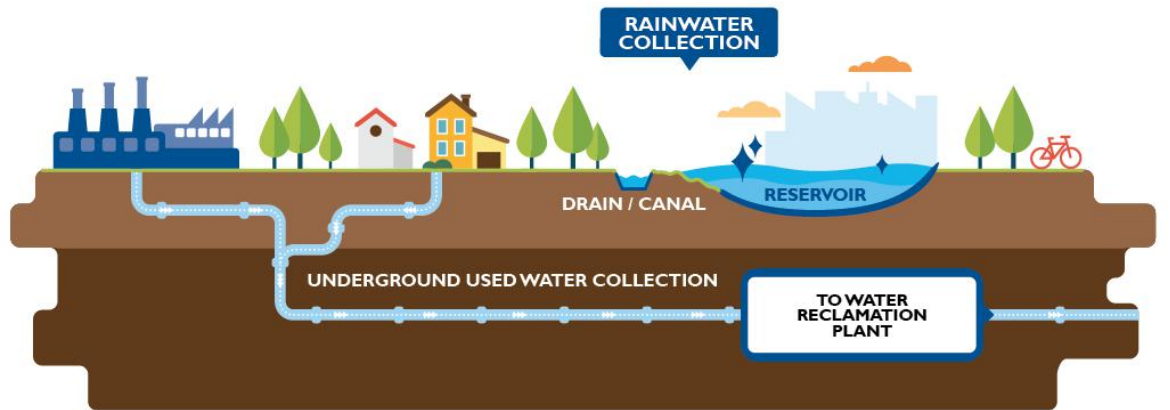
Marina Barrage is part of a comprehensive flood control scheme to alleviate flooding in the low-lying areas in the city such as Chinatown, Boat Quay, Jalan Besar and Geylang. During heavy rain, the series of nine crest gates at the dam are activated to release excess stormwater into the sea when the tide is low. In the case of high tide, giant pumps can drain excess stormwater into the sea.



3. Marina barrage-reservoir

3.1 Urban Stormwater Collection

Singapore is one of the few countries in the world to harvest urban stormwater on a large-scale for its water supply. Singapore has two separate systems to collect rainwater and used water. Rainwater is collected through a comprehensive network of drains, canals, rivers, stormwater collection ponds and reservoirs before it is treated for drinking water supply.



3. Marina barrage-reservoir

3.2 Keeping Reservoir Clean

Being a reservoir in the city, it is much more susceptible to pollution. Located close to the Central Business District and many key attractions, any pollution will therefore be highly visible.

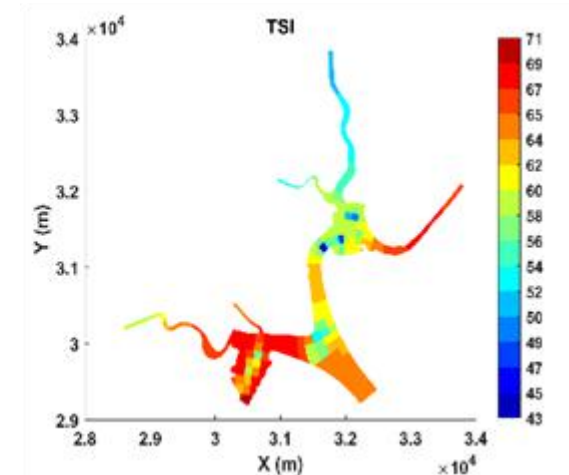
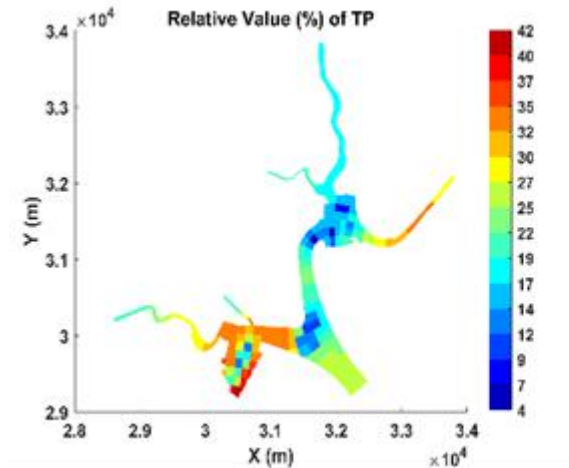
With these considerations in mind, many pollution control and mitigation measures were put in place, prior to the completion of Marina Reservoir.



3. Marina barrage-reservoir

3.3 Daily Maintenance

- PUB conducts clean-up in the reservoir from 7am to 6pm daily to ensure that it is free of litter. There is also daily night cleaning to 11pm
- Monitoring and water quality modelling





Thank you for listening!

Reference:

<https://www.pub.gov.sg/marinabarrage>

<https://www.pub.gov.sg/marinabarrage/aboutmarinabarrage/marinareservoir>