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JAKKUR LAKE REJUVENATION: BENGALURU

Project Highlights

- Improvement in the biodiversity in the surrounding area of the lake, increasing the aesthetic value of the locality
- Increase in employment opportunities and livelihood opportunities to the fishermen
- Increase in the usage of the lake by the local residents for recreational purposes

Background

Jakkur Lake is approximately 160 acres in size and is located in the northern part of Bengaluru near Yelahanka. It receives storm water through three (3) inlet drains starting from Yelahanka, Agrahara and Shivanahalli. Due to urbanization and increase in population, the quantity of the storm water reaching the lake decreased significantly over time and led the drains dry. Instead, the lake started receiving sewage from nearby 12,500 households surrounding the lake.



Project Duration

Initial Restoration by the government was carried out between 2009 and 2011, while the further restoration was conducted by Jal Poshan 2015 onwards

Key Stakeholders

Jal Poshan, Satya Foundation, Biome Environmental Solutions, Ananas, ATREE, BBMP, KSPCB, Fisheries Department, BWSS, Horticulture Department of Bengaluru

Project Objectives

- I. To use natural and self-sustainable methods of treating domestic wastewater to rejuvenate Jakkur lake

Approach

In the Jakkur model, the restoration work has integrated conventional grey with green infrastructure. Following step wise approach was adopted:

- The Lake was fenced to remove encroachments and de-silted
- The original 10 MLD secondary STP was upgraded to 15 MLD tertiary treatment STP. The local governing body maintained the legal standards for the STP as the water was fed into the constructed wetland for treatment and later into the lake
- Islands were created and trees were planted along the sides of the lake for creating bird habitation and to maintain natural flora and fauna
- The constructed wetland of 7 acres was created with wetland species such as vetiver, water hyacinth, typhaceae, and alligator weed. They helped in phytoremediation of the lake water
- Separate tank (kalyani) was built for idol immersion during religious/ cultural festivities thereby preventing the pollution the lake water
- Since 2015, through a collaborative and multi-stakeholder engagement model, Jal Poshan brought in various organizations to rejuvenate the lake ecosystem. Some of the key activities included:
 - Sustainable landscaping such as permaculture, community gardens etc.
 - Developing a permanent space for fishing community.
 - Up gradation of existing sedimentation tank

Achievements



Benefits and Co-Benefits

- Jakkur lake restoration project has provided livelihood opportunity to fishermen. On a normal day, they are able to collect at least 100 kilograms of various kinds of fish
- 100,000 liters per day of water is drawn from a step well near the lake for agricultural purposes
- Improved biodiversity in the surrounding area with increased presence of local and migratory birds
- Increased land value of nearby properties



(a) Before and (b) After Glimpse of the Jakkur Lake after the Restoration Activity

Success Factors

- Active participation of local residents for improving the conditions of the lake
- A consensus was reached between the villagers and BBMP that they would draw the water and use it beyond the lake boundary for their activities
- Jal Poshan fulfilled the role of coordinating between all agencies to maintain the lake

Limitations

- Rural-urban conflict due to restrictions placed on activities such as cattle grazing and bathing during the implementation period.
- Lack of awareness about the lake as some urban commons among all beneficiaries
- Continued fund raising to meet the O&M expenses

Future Prospects

This is a successful model of collaborative approach for lake restoration. Institutional mechanisms could be provided to facilitate an easier dialogue between various administrative agencies involved in keeping the lake clean and healthy.

Source: As received from WRI

For more Information

<https://www.cseindia.org/jakkur-lake-urban-lake-management-6402>

<https://swachhindia.ndtv.com/bengaluru-jakkur-lake-tree-plantation-drive-by-citizens-28264/>

<http://bengaluru.urbanwaters.in/case-study-lake-rejuvenated-for-people-nature-319>

<https://www.thehindu.com/news/cities/bangalore/348-crore-promised-in-budget-for-developing-59-lakes-over-three-years/article26227094.ece>

<https://sustainabilitynext.in/case-study/jakkur-lake-rejuvenation-lessons-in-impact-of-strong-community-leadership/>