



BBMP Elections

Lake revival: A task unfinished

Conservation efforts have been hampered as multiple government agencies are involved in the task; greens cry foul over recreational activities on revived waterbodies

Lakes, once the pride of Bengaluru, are in dire need of rejuvenation. But BBMP has no funds to even take over and maintain the 12 lakes revived by Bangalore Development Authority (BDA) at a cost of Rs. 73.5 crore. Only five of the 38 lakes under the Palike's possession are in good condition.

Many government agencies are stakeholders in development of lakes. Though funds are reserved for conservation activities, these are always lost in transit. Result: Actual conservation efforts have been hampered.

Priya Ramasubban, founding trustee of MAPSAS (Mahadevapura Parisara Samrakshane Mattu Abhivruddhi Samiti) suggests imposition of a higher property tax on those who have lake frontage, since they are the direct beneficiaries of the water body's proximity to their homes. The extra percentage paid by these residents should be utilised by the government agency towards development and maintenance of the said lake.

Though Bengaluru still has many good lakes, there is always scope to make it better through citizen's efforts. Lakes such as the one in Kaikondrahalli on Sarjapura Road and Jakkur lake are classic examples of how citizens' participation has worked well. These

lakes have well preserved biodiversity and minimal recreational activities.

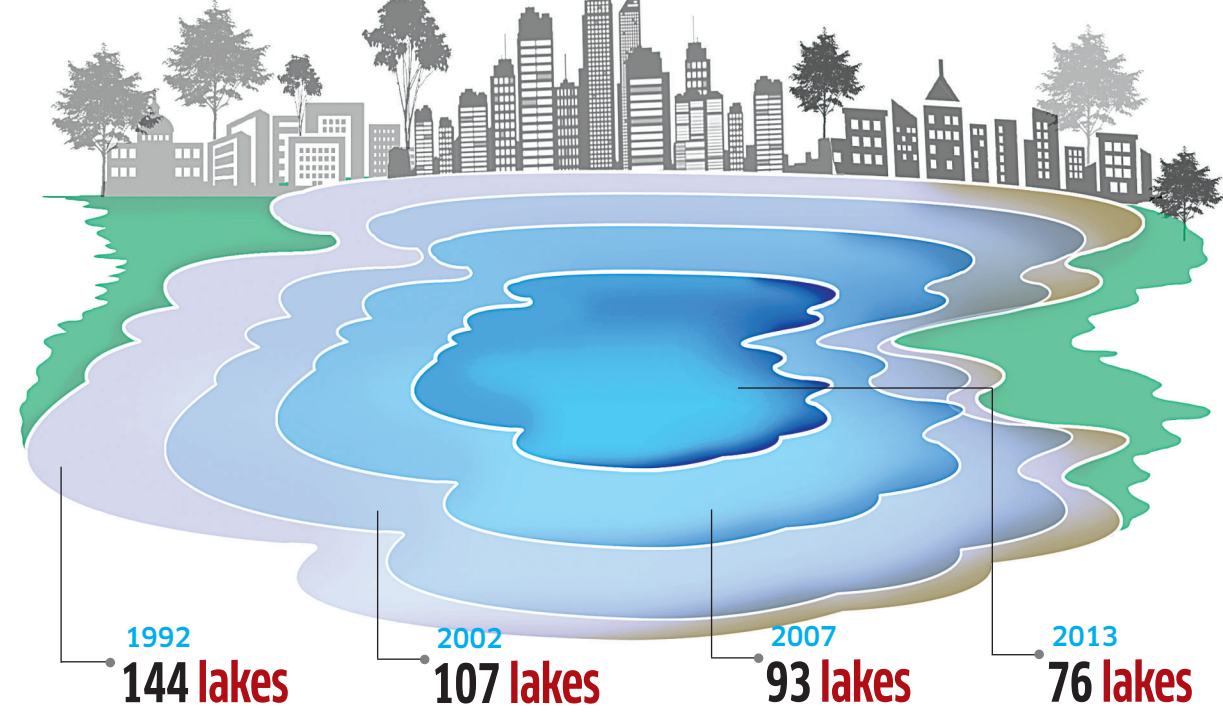
However, environmentalists cry foul over activities in lakes such as Nagawara lake, which also houses the Lumbini garden; and boating in Sankey tank and Madivala lake. The experts say that the diesel used in the motor boats affect the lake ecosystem. The smoke and diesel oil leaking into the lake affects not just the aquatic species but also the birds.

Madhuri Subbarao from 'Friends of Lakes' says it is very important to conserve the lake as it exists without making any changes in the landscape. "Boating should not be allowed, even walk paths should not be created. Facilities should not be made for people to access the island portion of the lakes. Besides fishery and dairy farming, no other activity must be allowed," she elaborates.

Dr Harini Nagendra, Professor of Sustainability at Azim Premji University draws attention to cities such as New York, Singapore and Vermont where green ways are carved out of abandoned rail road tracks. These, she says, could serve as inspiration for Bengaluru to create green ways from restored stormwater channels.

According to her, one of the best ways to protect and re-

Shrinking waterbodies



store the stormwater channels, which now largely carry sewage, is by removing the concrete and treating the sides by planting reeds and other wetland vegetation that can provide natural bio-remediation. These restored channels can then be attractively landscaped with cycling and pedestrian pathways to encourage sustainable transport. They

could also provide linear corridors and long green parks to be used for exercise and recreation.

She points to Bellandur and Varthur lakes as the city's worst water bodies, while some of the best restored lakes are Kaikondrahalli lake on Sarjapur road and Puttenahalli lake in JP Nagar. These have been restored and maintained

in collaboration with local communities.

S R Nagaraj, technical adviser to CEO of Lake Development Authority, says that a lake becomes good when the groundwater quality improves in the vicinity and it is equipped with proper fencing to avoid encroachment, aquatic species breed and attract birds. "A lake should be a basin

for capturing rain water and all lakes must be connected to ensure smooth flow of water from one lake to another. Keeping in mind the current requirement, there should be recreation and walking spaces."

Since 2008, BDA has been given the task of rejuvenating 117 lakes. Till 2012, the authority has managed to revive 12

lakes at a cost of Rs 73.5 crore and another 17 lakes are to be revived at a cost of Rs 21.5 crore. BDA will be reviving the remaining 88 lakes as and when they receive funds, according to BDA official P N Nayak.

Of the lakes, some of the better ones are in Jakkur, Rachenahalli and Komaghatta. These have well maintained fences and desilted lakebed. The lakes are also equipped with sewage treatment plants to prevent entry of raw sewage.

Yet, most of the city lakes are filled with sewage. Bangalore Water Supply and Sewerage Board (BWSSB) has proposed to set up STPs at 11 locations near the lakes. These are expected to be commissioned only in 2016.

An STP of 90 million litres per day (MLD) capacity is in the pipeline for Bellandur Amani lake. A 20-MLD capacity STP has been proposed at Horamavu Agara.

The Kengeri, Koramangala and Challaghatta Valley is to get an STP of 60 MLD capacity each. For Nagasandra and Doddabele STPs of 20 MLD each are proposed. Others STPs in the list are: Yellamalappachetty 15 MLD, Kadugodi six MLD, Chikkabanavara five MLD and Kachohalli three MLD.

Poornima Nataraj and Bosky Khanna

■ According to IISc experts, there are no dead lakes in the City. Lingadahalli and Doddabommasandra lakes, as per ecological and scientific definitions, are not dead. They help recharge groundwater for two months during monsoons.

■ Recently, Karnataka State Pollution Control Board (KSPCB) permitted L&T South City Gruhastoma Apartments to let out their treated water into the lake. This was on a pilot basis to increase water levels in the lake.

■ Lake Development Authority had revived four lakes at Rs 4-5 crore as part of the Indo-Norwegian Project in 2002-03 under PPP model. The lakes are: Hebbal, Nagawara (Lumbini), Vengayanaakere and Agara Lake.

■ Buffer zones mandated under Ministry of Environment and Forests, BDA's Rules, Karnataka Town and Country Planning Act of 1961, Wetlands (Conservation and Management) Rules of 2010 and Wetlands Regulatory Framework, 2008, too do not exist.



MADHURI SUBBARAO
Friends of Lakes
Lake maintenance should be done with minimal cosmetic beautification. Original lake bund should be retained. Boating should never be allowed in lakes as it pollutes the environment.

DR ANNAPURNA S KAMAT
Managing trustee, Satya Foundation
We are creating nursing spaces for the 200-plus pelicans at Jakkur lake. Residents have taken up conservation activities. Home guards are protecting this lake.

DR ANAND A R
President, Sankey Park Walkers' Association
Sankey is a precious jewel of the neighbourhood. Sewage inflow into lake is still happening. The work on bund and walking path on the west bank has to be expedited.

GV JAYARAM
Resident, Gottigere
After the infrastructure boom on Bannerghatta Road, the Gottigere lake has got spoilt. Recently, on the Upa Lokayukta's intervention, Rs 80 lakh was sanctioned to revive it, but nothing has been done.



EXPERTS SPEAK
Dr TV Ramachandra,
Energy and Wetlands Group, Centre for Ecological Sciences, IISc
A comprehensive approach to water resources management is needed to address the myriad water quality problems that exist today from non-point and point source and from catchment degradation. This approach emphasizes all aspects of water quality, including chemical water quality physical water quality habitat quality, biological health and biodiversity.

Lakes encroached for illegal buildings
54%
Lakes that are sewage fed (2007)
66%

Karnataka Lake Authority might just save the lakes

The Karnataka Lake Conservation and Development Authority (KLCDA) is now in its final stages of becoming a full-fledged powerful body. Once this is formed, the expectation is that the city lakes will start seeing some improvement.

The government's objective in forming this Authority is to end the blame game and fix the ownership of the lakes. By implication, this will decide who should improve it and who is responsible for lake pollutions.

The Authority will have legal powers to take action against the errant officials and the organisations. The draft rules are getting finalised and then it will go for government signatures. All this will take around a

month's time, Ramachandra, Secretary to Government (Environment and Ecology), Forest, Environment and Ecology Department, told *Deccan Herald*.

He explained, "We want to ensure that there are no loopholes in the new act and authority, and so it is taking some time. KLCDA will take stringent steps against encroachment, issue orders to clear encroachments and corrective measures to conserve water bodies across the State. It will also have powers to allocate funds to organisations."

KLCDA is replacing Lake Development Authority, which did not have regulatory and penalising powers. "Earlier we used to observe but did not have the powers to do something

other than just guide. But now we will have the powers. A survey of all the lakes will be done and the water bodies will be renovated. This will take four to five years. The ridge portions will be connected and sewage entry will be stopped," said S R Nagaraj, Technical Advisor to Lake Development Authority Chief Executive Officer.

A Detailed Project Report of all the lakes is to be prepared and their rejuvenation undertaken in a phased manner. This process will start from North Bengaluru to down South. According to the N K Patil report of 2010, the committee needs to develop 210 lakes. But now this number would have changed. Thus the survey will help. "A plan on how to improve all lakes is also being prepared. Lakes are important because groundwater is depleting and City air is polluted. Lakes are primary source of water and prime lung space," he added.

The constitution of KLCDA was announced on June 7, 2015, by Chief Minister Siddaramaiah. All civic organisations have been brought under this body- Bangalore Development Authority, Bruhat Bengaluru Mahanagara Palike, LDA, Minor Irrigation Department, Revenue Department and Forest Department.

It will have regulatory control over all lakes under jurisdiction of municipal corporations of Mangaluru, Hubballi-Dharwad, Mysuru, Belagavi, Tumakuru, Davangere, Ballari, Kalaburagi and BBMP.

Headed by the chief secretary, KLCDA will also have the powers to book offenders and penalise them. Encroachers could be penalised for three to five years.



■ The recently rejuvenated lakes such as KR Puram, Kaikondanahalli, Allalsandra, Yelahanka and Jakkur are good. But there are threats to be taken care of like- encroachment of lake beds, flood plains and SWDs. The other threats are lake reclamation for infrastructure purposes, topography alterations in lake catchment, unauthorised dumping by municipalities and removal of shoreline riparian vegetation.

■ The other major problem is the multiplicity of parastate agencies and lack of coordination among them. Also, there are different custodians for upstream and downstream lakes in the valley.

Lakes with catchment area loss:
72%
Lakes surrounded by slums
14%

