

# Saving Puttenahalli Lake (Bengaluru, India)

Usha Rajagopalan

Usha is a writer and conservationist based in Bengaluru, India.

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The city of Bengaluru is located on the Deccan Plateau in southern India at an elevation of over 900 metres above sea level. This makes for temperate weather and two spells of rain: the South West monsoon from June to September, and the shorter North East monsoon in November and December. In order to harvest and conserve this monsoonal rainfall, early rulers of the region dammed the natural valley system and built reservoirs. The founder of the city, Kempe Gowda, is then said to have built more reservoirs. In the late 1800s, the British army interconnected them in a cascading system of stormwater drains called *Raja kaluve*. Overflow from one filled the next and Bengaluru came to be known as the 'City of a thousand lakes' (Balasubramanian, 2011: 22).

The salubrious climate, profusion of trees and gardens and copious availability of water made the city an attractive place in which to live. The British set up their cantonment in 'Bangalore' in 1809; a number of prestigious educational institutions and public sector industries were established; then the IT services export boom of the 1980s led the city to become known as the 'Silicon Valley of India'.

The ownership, management and use of the city's water reservoirs also changed over time. Early rulers had assigned the task of protecting and regulating the distribution of water to certain families in the local community. When the reservoirs passed into public ownership, the hereditary *neeruganti* were replaced with government administrators. With livelihood options changing, the reservoirs began to be neglected and misused. Consequently, when the demand on land increased, it became easier to build upon what were once life-supporting bodies of water. Hundreds of lakes were drained and built over with bus terminals, stadiums, shopping malls and residential housing.

The destruction of Bengaluru's lakes prompted environmentalists and other concerned citizens to approach the court and obtain landmark judgements such as a ban on the privatization of lakes (Nagendra, 2016: 181). However, because of political interference, bureaucratic apathy and public misuse, the

lakes continued to suffer – much like the one in my new neighbourhood. Puttenahalli Lake had pools of sewage, mounds of construction debris, burning trash piles and unapproved housing on the embankment which was steadily usurping more land.

### Saving the lake

As a young mother, I had given up a professional career to look after my children and pursue my passion for creative writing. While I read newspaper reports about vanishing forests, drying rivers and worsening droughts, I hadn't spent much time worrying about them. Now the sight of the dying Puttenahalli Lake filled me with deep remorse. When we were young, my father, a forest official, had tried to inculcate a respect for environment and natural resources in me and my siblings. *Anna*, as we had called him, had died a few months before we shifted to Bengaluru. I felt that by watching the lake vanish before my eyes, I was letting him down; that I would be as responsible for its demise as the government to which it belonged.

Guilt is a heavy burden, and in 2008 I began a public campaign to get the municipality, the Bruhat Bengaluru Mahanagara Palike (BBMP), to rehabilitate the lake. However, many people felt that those in power would not listen to the voice of the public. Nevertheless, together with three friends, I persisted in lobbying elected representatives and government officials. Finally, frustrated by their unrealized promises, I appealed to a neighbour, a senior city planner, who used his clout with the bureaucracy to push BBMP to rejuvenate the lake. In response to our campaign, the municipality desilted the basin, raised the embankment, fixed inlet pipes and constructed a wetland and a waste weir.

The sight of the heavy vehicles and tippers at work created a buzz in the locality, and we held an Earth Day event in my apartment complex in April 2010 at which we publicized the revival of Puttenahalli Lake. In order to ensure the ongoing health of the lake, in June 2010 I co-founded a non-profit trust, the Puttenahalli Neighbourhood Lake Improvement Trust. Our intention was to assist BBMP with the lake's maintenance but, in a path-breaking move, they made us official custodians. We grabbed the opportunity and set out to make residents in the area assume responsibility for their neighbourhood lake (Puttenahalli Neighbourhood Lake Improvement Trust, 2018).

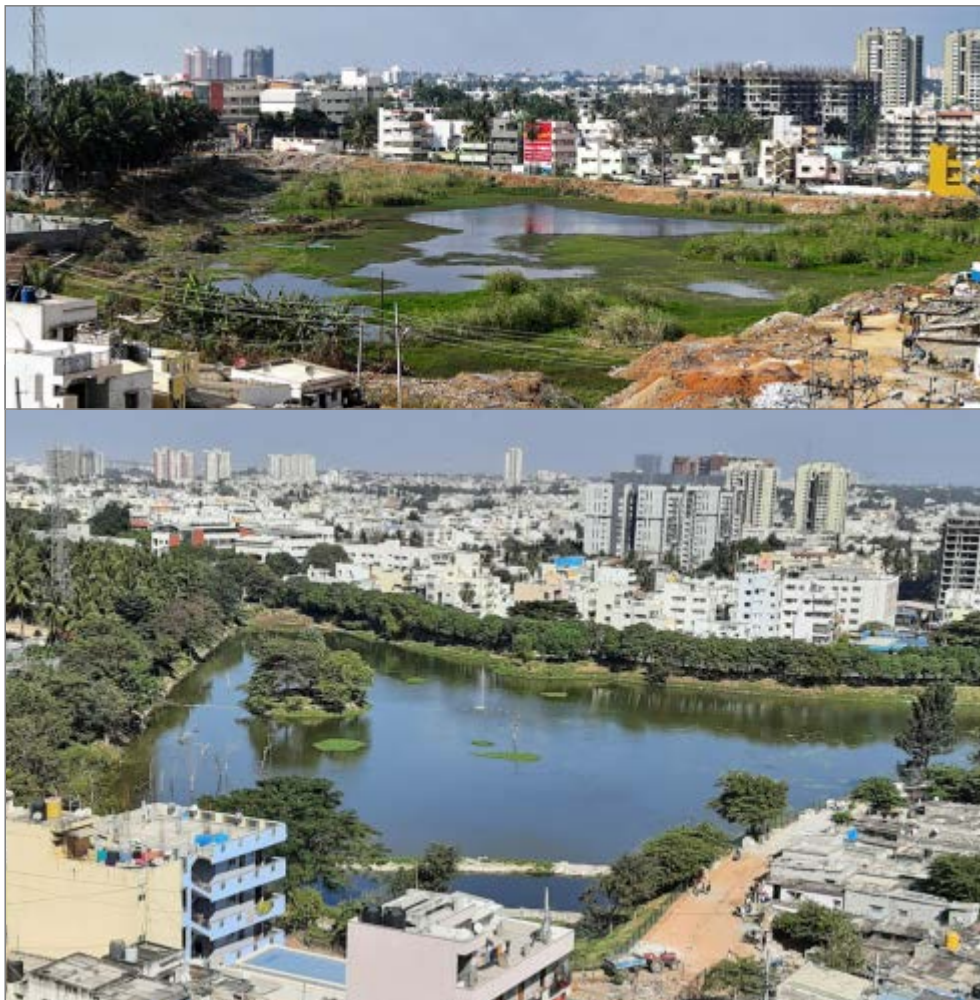
Almost everybody loves to plant trees; so, together with the BBMP, we organized a plantation drive to which we invited local residents. With the donations we collected that day, we hired a gardener. We continue this practice of meeting maintenance expenses with donations received from individual well-wishers – a dependency that encourages us to be inclusive and people-centric. Along with sharing our excitement at the sighting of a new bird or a tree bursting into flower, despite our tight budget we also organize environment-related and cultural programmes throughout the year.

Given our good working relationship with the municipal engineers, we could request them to install an aerator fountain or erect a pergola to support climbers. However, the government paperwork is so time-consuming that we prefer to seek small corporate grants and execute such projects ourselves. This

makes BBMP more open to undertaking larger-scale infrastructural work at our request – such as harvesting surface runoff from new sources or modifying the existing constructed wetland according to our design. Photos of the lake in 2009 (pre-restoration) and 2022 are shown in Figure 1.

In mid-2015, we began to augment the lake's natural inflow with treated water from the sewage treatment plant at my apartment complex. Getting the requisite permission took over a year of constant follow-up with the BBMP and the Karnataka State Pollution Control Board who feared surreptitious discharge of raw sewage to the lake. We convinced the officials and the apartment owners' association to assume joint responsibility with us for the water quality. In order to purify the treated water further, we installed an aerator fountain, and introduced bio-filter plants in floating platforms. The Karnataka Forest Department has replicated this model in other lakes (Bangalore Mirror Bureau, 2019).

Extensive media coverage now leads people from across India to seek our advice on lake restoration (Scroll.in, 2018). Bengaluru today has more than 50 lake groups inspired directly or indirectly by Puttenahalli, which BBMP calls an "iconic lake" (Lakes Department, 2020).



**Figure 1.** The lake pre-restoration, in 2009 (top; photo by Usha Rajagopalan), and post-restoration, in 2022 (bottom; photo by R Gopalakrishnan).

## A living lake

Puttenahalli Lake is home to many species of water and land birds, butterflies and other insects, and reptiles (iNaturalist, 2022). So much so, we are quite often asked by visitors if we had released them. We didn't have to. The newly rejuvenated lake – which had looked like a football ground – became a marsh after the first monsoon, with a profusion of Bulrush (*Typha latifolia*), Alligator Weed (*Alternanthera philoxeroides*) and Dense Flower Knotweed (*Polygonum glabrum*). The birds loved them.

Some of the bird species sighted at the lake are Indian Pond Heron (*Ardeola grayii*; Figure 2), Purple Heron (*Ardea purpurea*), Little Egret (*Egretta garzetta*; Figure 2), Painted Stork (*Mycteria leucocephala*; Figure 2), Pied Kingfisher (Figure 3), Grey-headed Swampphen (*Porphyrio poliocephalus*), Eurasian Coot (*Fulica atra*), Little Grebe (*Tachybaptus ruficollis*), Common Moorhen (*Gallinula chloropus*), Oriental Darter (*Anhinga melanogaster*; Figure 4), Cormorant (*Phalacrocorax carbo*) and Pheasant-tailed and Bronze-winged Jacanas (*Metopidius indicus*). At ten acres, the lake is too small for bigger birds. Nevertheless, a pair of Spot-billed Pelicans (*Pelecanus philippensis*) come occasionally.

Very recently, the Indian Spot-billed Duck (*Anas poecilorhyncha*; Figure 5) and the Brahminy Kite (*Haliastur indus*; Figure 6) nested at the lake for the first time. The lone kite chick has learned to fly high up the tree on the island out of public sight while a half-dozen or more ducklings follow the parents in a line, much to the delight of the visitors. Unlike the ducklings, the chicks of the White-breasted Waterhen (*Amaurornis phoenicurus*; Figure 7) have shown a tendency to wander on land. They were fortunate that the lake was closed for visitors last year due to the pandemic.

We purchased butterfly-attracting plants from nurseries but found that the insects were equally drawn to a 'weed', *Heliotropium indicum*, which was growing in a small patch at the edge of the lake. We collected the seedlings and



**Figure 2.** An Indian Pond Heron (left), a Little Egret (middle) and a Painted Stork (right; photo by Prakash Ananthapur).



**Figure 3.** A Pied Kingfisher (photo by Prakash Ananthapur).



**Figure 4.** An Oriental Darter with a fish (photo by Prakash Ananthapur).



Figure 5. Spot-billed Ducks (photo by Muktha Baliga).



Figure 6. A Brahminy Kite (photo by Kamal Hari Menon).



Figure 7. A White-breasted Waterhen (photo by Prakash Ananthapur).

planted them in other places. The last two years have seen swarms of Blue Tigers (Figure 8) and Crow Butterflies especially during their pre- and post-monsoon migration between the eastern and western *ghats*. Bengaluru, providentially, is in their path (Deepika, 2020). There have also been reptiles sighted around the lake, including Indian Star Tortoises (Figure 9) and Checkered Keelbacks (Figure 10).



Figure 8. Blue Tigers on *Heliotropium indicum* (photo by Aditi Mahesh).



**Figure 9.** An Indian Star Tortoise (photo by Srinath Kaluve).



**Figure 10.** A Checkered Keelback (photo by Madhurima Das).

### Overcoming challenges

Commercial fishing was an unexpected threat which arose after we filled the lake with treated water. The Fisheries Department found the quality to be excellent and auctioned rights to fishing on the lake from November 2015. We discovered this only after we had cleared the water of invasive weeds and the fishermen came by to introduce Rohu, Catla and Snakehead Murrel. The size of the fish and the constant presence of the fishermen impacted bird life. We requested the Fisheries Department to exempt not only Puttenahalli Lake from commercial fishing but also other small lakes so that they may be nurtured as avian habitats and biodiversity conservation centres. In May 2022, after support from the Forestry Department, our exemption was approved, and the fishing contract was not renewed after it expired at the end of June 2022.

Sewage influx and encroachment are the biggest threats especially for urban lakes. At Puttenahalli, these are interlinked. With the area around Puttenahalli Lake developing, the underground drainage in the adjacent residential layout could no longer handle the additional load and untreated sewage began entering the lake (Dayanand and Swathi, 2019). We have been engaged in a long and difficult struggle with the municipal bureaucracies to have this situation rectified – a struggle which we have now escalated to the courts. A favourable verdict will protect the lake. Otherwise, we will continue our fight to achieve this goal. With so many individuals and groups following us closely, the court direction and our action will surely reflect on the citizen-led lake conservation movement in Bengaluru.

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## References

- Balasubramanian V (2011) *Task Force for Recovery of Public Land and Its Protection: Greed and connivance*. Chairman's Report. Available at <https://is.gd/3cA9Yh> (accessed June 2022).
- Bangalore Mirror Bureau (2019) Islands of 'hope' at Madiwala Lake. *Bangalore Mirror*, 23 March.
- Dayanand N and Swathi K (2019) Sewage threatens 'model' Puttenahalli lake. *The Hindu*, 20 July. Available at <https://is.gd/E3Orbi> (accessed June 2022).
- Deepika KC (2020) Butterflies swarm Bengaluru's green spots. *The Hindu*, 24 May. Available at <https://is.gd/1Ddn14> (accessed June 2022).
- iNaturalist (2022) Puttenahalli Lake. Available at <https://is.gd/3Q41Rg> (accessed June 2022).
- Lakes Department (2020) Puttenahalli Lake. Available at <https://is.gd/hjYK2d> (accessed June 2022).
- Nagendra H (2016) *Nature in the City: Bengaluru in the past, present and future*. Oxford University Press, New Delhi, India.
- Puttenahalli Neighbourhood Lake Improvement Trust (2018) The Revival of Puttenahalli Lake.
- Scroll.in (2018) Eco India: Bengaluru is witnessing a transformation, one lake at a time. Available at <https://is.gd/Oc2ivt> (accessed June 2022).