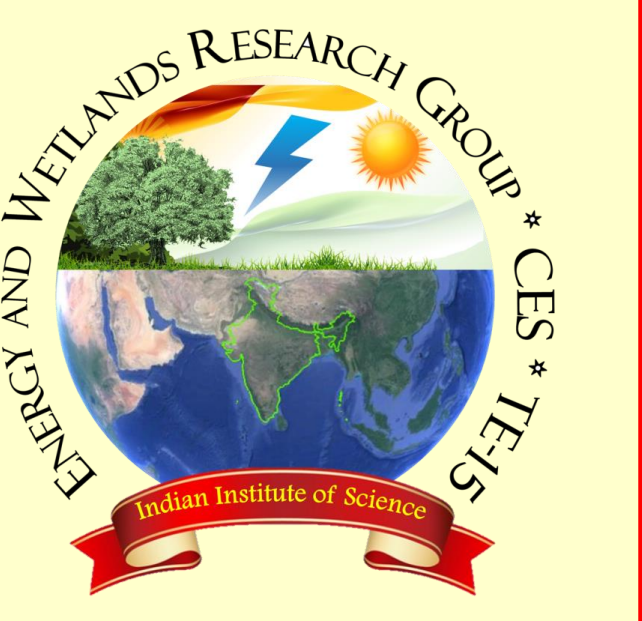


Pathetic Status of Sarakki Lake

Asulabha K S, Sincy V & Ramachandra T V

Energy and Wetlands Research Group, Centre for Ecological Sciences, Indian Institute of Science, Bangalore

URL: ces.iisc.ernet.in/energy, Phone: 080 22933099, email: tvr@iisc.ac.in



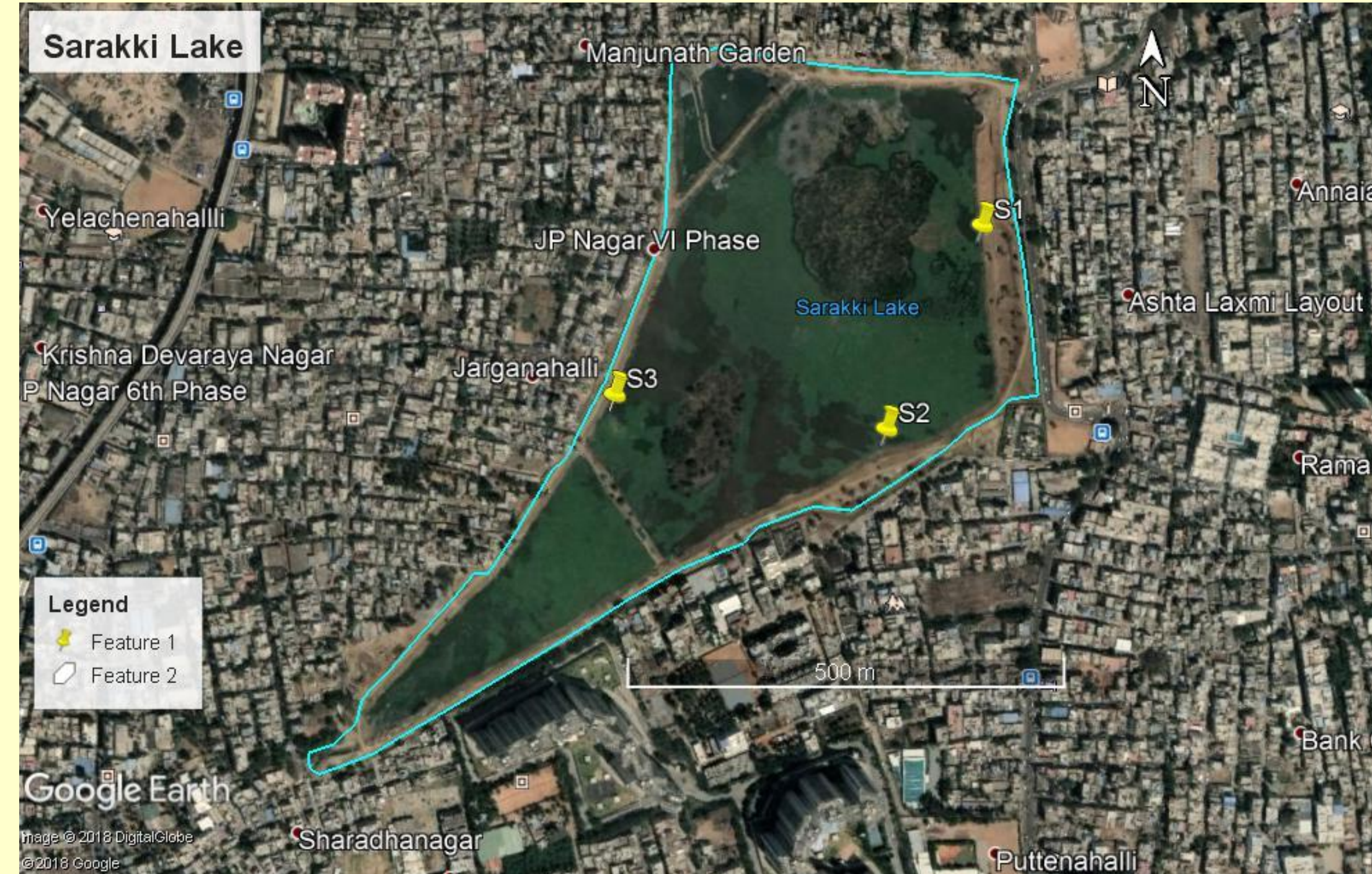
❖ Sarakki lake also called Jaraganahalli lake is located in Jaraganahalli, JP Nagar, Bengaluru.

❖ Sarakki is an abbreviation of "Saavira Hakki" which means "thousand birds" in Kannada.

❖ The lake has been under restoration and belongs to KC Valley

❖ Now, birds have vanished with the decline of aesthetic value due to untreated sustained inflow of sewage and encroachments.

Study Area



GEOGRAPHIC DETAILS	Latitude & Longitude -12°53'27"N to 12°54'09"N, 77°34'17"E to 77°35'01"E; 12°53'26"N to 12°54'10"N, 77°34'20"E to 77°34'58"E
Area as per RTC	107.3 Acres
Custodian	BDA
Village Name & Survey No	Jaraganahalli-7, Sarrakki-26, Puttanahalli-5, Kothanuru-103, Chunchaghatta-28



Problems faced by Sarakki Lake – Irresponsible & Unscientific Management



1. Encroachment; 2. Burning of plastic wastes; 3. Inflow of untreated sewage; 4. Dumping of solid waste; 5. Macrophyte cover and Accumulation of organic matter

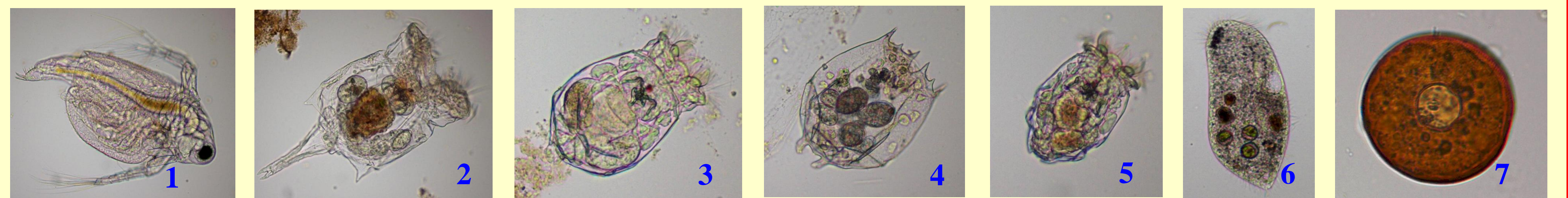
Water Quality

Parameters	S1	S2 (Inlet)	S3	Water quality Standard IS 10500, 1991-2011	
				Desirable	Permissible
Water temperature (°C)	28.2	27.5	30.1	-	-
TDS (mg/l)	480	720	706	500	2000
EC (µS)	706	993	950	-	-
pH	7.22	7.04	7.21	6.5-8.5	No relaxation
Turbidity (NTU)	26.05	173.25	16.68	5	10
DO (mg/l)	1.46	0	3.66	-	-
BOD (mg/l)	46.75	77.24	50.81	-	-
COD (mg/l)	60	116	56	-	-
Alkalinity (mg/l)	412	585.33	565.33	200	600
Chloride (mg/l)	90.41	128.27	128.27	250	1000
Total Hardness (mg/l)	214.67	265.33	317.33	300	600
Calcium (mg/l)	55.04	61.99	82.56	75	200
Magnesium (mg/l)	18.84	26.97	27.12	30	100
Orthophosphate (mg/l)	4.110	4.256	3.215	-	-
Nitrate (mg/l)	0.539	0.984	0.594	45	100
Sodium (mg/l)	127.5	184	168	-	-
Potassium (mg/l)	64.5	42	64.5	-	-

Aquatic Biodiversity



Algae: 1. *Pandorina* sp.; 2. & 3. *Phacus* sp.; 4. *Euglena* sp.; 5. *Lepocinclis* sp.; 6. *Euglena* sp.; 7. *Nitzschia* sp.



Zooplankton: 1. *Ceriodaphnia* sp.; 2-5. *Brachionus* sp.; 6. *Paramecium* sp.; 7. *Arcella* sp.

Conclusion:

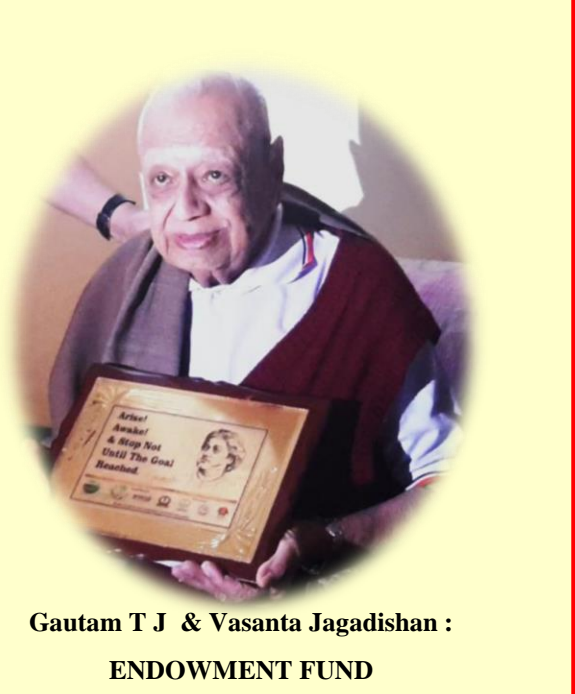
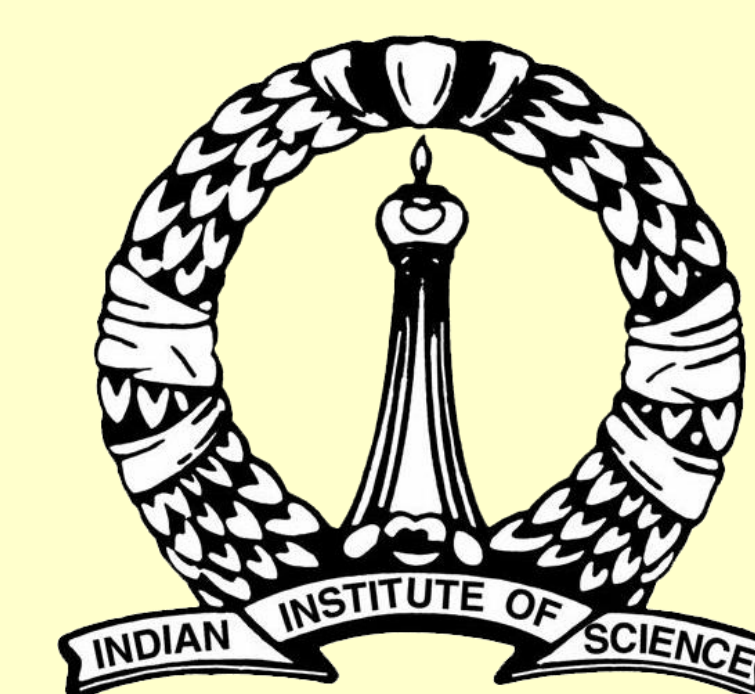
- ❖ Lake is eutrophic due to sustained inflow of untreated sewage
- ❖ Lake water has very less dissolved oxygen (DO) at all sites due to sewage and high rate of decomposition of organic matter.

Recommendations:

- Only allow treated sewage,
- Remove all encroachments and maintain 75m buffer zone,
- Regular harvesting of macrophytes,
- Apply polluter pays principle,
- Restore the lake quickly with the adoption of integrated wetland system as in Jakkur model
- Nexus of contractors, engineers for delaying the restoration process.



Birds: 1. Common Myna (*Acridotheres tristis*); 2. Black-headed Ibis (*Threskiornis melanocephalus*); 3. Glossy Ibis (*Plegadis falcinellus*); 4. House Crow (*Corvus splendens*); 5. Little Egret (*Egretta garzetta*); 6. Common Myna (*Acridotheres tristis*); 7. Purple Moorhen (*Porphyrio porphyrio*); 8. Cattle Egret (*Bubulcus ibis*); 9. Common Coot (*Fulica atra*)



Gautam T J & Viswanth Jagadishan : ENDOWMENT FUND