



NEW DELHI

# REQUEST FOR PARTNERS

Ecological Restoration and Sustainable Development

## Project focus

The project focuses on the ecological restoration and sustainable management of Roshanara Lake through systematic **de-weeding, dredging, and water quality improvement measures**. It aims to restore aquatic health, enhance biodiversity, and ensure long-term water quality by removing excessive aquatic vegetation, treating inflows, and promoting a balanced ecosystem that supports fish and waterfowl habitats.

## Location

Roshanara Bagh, Shakti Nagar,  
New Delhi

**Coordinates: 28°40'26.57"N 77°11'58.75E**



Contact us at [er@thuvakkam.org](mailto:er@thuvakkam.org) for more details

# About the Problem



Roshanara Lake is facing severe ecological degradation due to eutrophication, primarily caused by excessive nutrients like phosphates and nitrogen. This has led to dense **duckweed growth** and **algal blooms, depleting oxygen, harming aquatic life, and producing foul odors.**



**Area of the Tank** : 12950 sq.mt

**Walking track around the lake** : 1.3km

**Interventions planned**

12950 sq.mt

**Main focus is on De-weeding**

4-5m depth

**lake restoration**

1.3km

**Butterfly garden set-up**

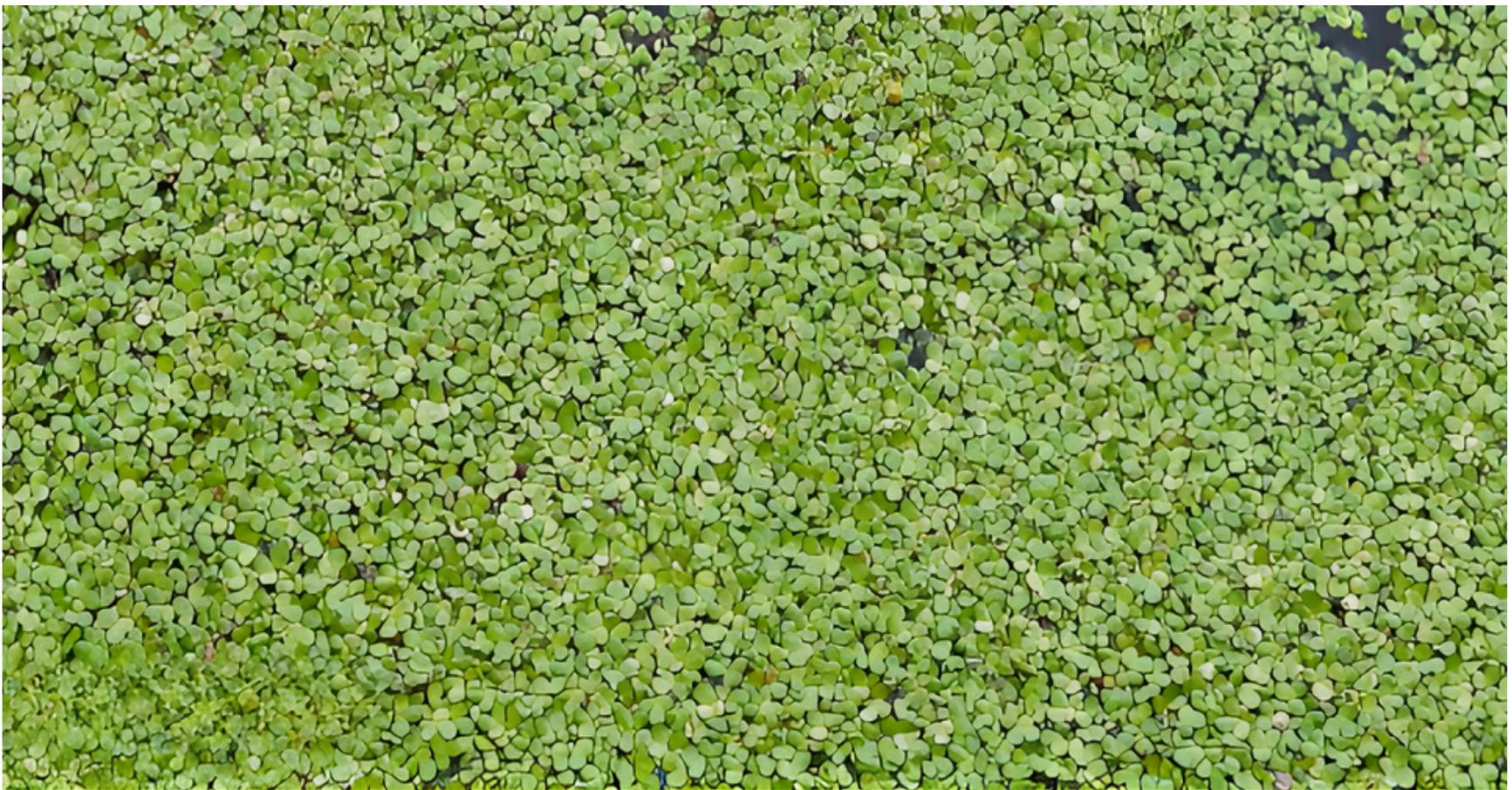
# Site present conditions



**Algal blooms**



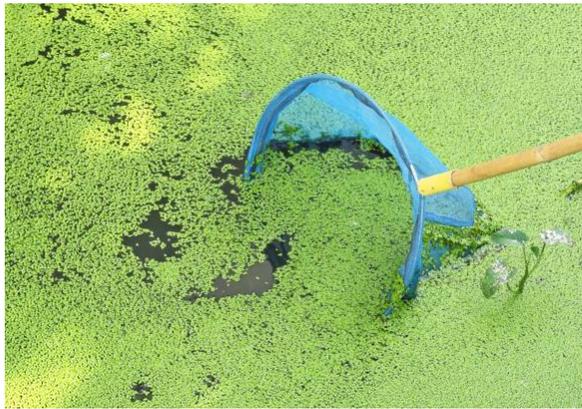
**Foul odours**



**Duckweed growth**

**80% covered**

# Scope of Work



## Manual Harvesting

Manual, low-cost weed control suits small areas but can muddy water and spread fragments.



## Weed Removal Machines

Motor-driven underwater rotovators cut and loosen weeds and till lake sediments.



## Chemical treatment

Flocculation with chemicals like alum helps neutralize acidity and raise the pH of stagnant water.



## Aeration

Aeration boosts dissolved oxygen, mixes water layers, and improves quality; de-weeding, dredging, and drainage maintenance also aid oxygen levels.



## Weed edible species

Herbivorous animals like insects, snails, fish, and waterfowl can be introduced to lakes to naturally control aquatic weeds.



## Solar powered floating Skimmers

Uses solar skimmers, a harvester, and manual tools to cut weeds by 50% in 3 months; ultrasound buoys and dredge skimmers aid cleanup, with biomass composted.



## Butterfly garden set-up



## Community Awareness



## Monitoring & Evaluation



# Strategic Importance of Roshanara Lake Restoration in the Context of Sustainable Development

- Roshanara Lake restoration addresses severe ecological degradation caused by nutrient overloading and eutrophication, improving water quality and supporting aquatic biodiversity essential for ecological balance and migratory birds habitat.
- The project enhances long-term water security by reducing environmental contamination, controlling invasive weed growth, and promoting natural purification methods, which contributes to a resilient urban ecosystem.
- Restoration efforts boost local biodiversity and ecosystem health through habitat improvements for fish and waterfowl, while supporting community engagement in sustainable water management practices.
- The initiative aligns with sustainable development goals by integrating environmental conservation, community resilience, and eco-friendly technologies to ensure a cleaner, healthier environment and better livelihoods around the lake.





## Why Thuvakkam?

- ✓ End-to-end project design & execution
- ✓ CSR Utilization certificates & other mandatory compliances
- ✓ Government & community collaboration
- ✓ Impact reports
- ✓ Branding on-site & social media
- ✓ Media visibility & recognition

**Be the Change  
you wish to see**

Contact us at

Mail: [er@thuvakkam.org](mailto:er@thuvakkam.org)

Call: **+91 94448 88937**

for more details

