

Guidelines for Eco-restoration of Urban and Rural Ponds

Introduction

Kerala State Biodiversity Board is actively involved in the process of conservation of Biodiversity of the state so as to “*To ensure clean air, clean water, healthy soil and safe food to mankind*” sustainably. One of the major activities of the Board is Urban Biodiversity Conservation Programme targeted at promoting the conservation of urban/rural natural ecosystem, ponds and other water bodies, and bringing eco friendly approaches for planned green development in urban and rural areas through BMCs of Corporation/Municipalities/Panchayat and Resident’s Associations. The Guidelines developed by Kerala State Biodiversity Board have the objective to assist in setting up a mechanism for funding assistance for ecorestoration of urban / rural ponds. Guidelines also include specific actions that LSG/ resident associations might draw upon in designing locally applicable practices to ensure that green space is maintained.

Aim of the Programme

- Conservation of urban/ rural ponds so as to prevent their further degradation and ensure their wise use for the benefit of local communities for recreational purposes. The Water bodies will function as spaces for development of open space greenery which provide for a range of micro natural habitats for flora and fauna.

Objectives

KSBB shall seek to promote:

1. Conservation and rejuvenation of degraded ponds for recharging aquifers of the state
2. Control of pollution of small water bodies and uncontrolled discharge of waste water, and solid effluents to ponds
3. Conservation of aquatic flora and fauna
4. Development of the surrounding areas with suitable flowering plants/medicinal plants/shrubs/ climbers
5. Enhancing natural beauty and providing a green space for enriching the spiritual,

aesthetic and social life of dwellers

Process for identification of urban/rural ponds

Applications invited through advertisement in the website or through press

Eligibility for the scheme:

- Any pond which needs restoration which is located in a public domain.
- The representatives of the Residents Association/ Peoples representatives/NGO/ Organizations/Institutions can submit formal request in the format attached.

Priority pond selection criteria

- 1) Highly degraded and cannot be used because of domestic and other pollution
- 2) The pond was an important source of drinking water/ domestic use but is no longer usable due to pollution and not meeting the desired water quality
- 3) The pond was rich in biodiversity but now degraded
- 4) Inappropriate land use leading to heavy soil erosion and deposition of sediments / solid wastes resulting in eutrophication
- 5) There is demand from the local stakeholders for its protection

Scrutiny of proposals and approvals

- Site inspection visit by experts and board officials.
- Based on the genuinity and merit of the proposals, selection is made by a committee consisting of the Chairman, Member Secretary, Principal Scientific Officer and Technical Experts.
- A formal discussion with the officials of the residents association & Peoples representatives to understand their commitment and capability to undertake the work.
- Preparation of the estimate after consultation with experts followed by the official approval by the Board.

- Technical advice will be provided by the KSBB
- Monitoring of the Project by BMC of the LSG.

Quantum of assistance

The assistance will be limited to a maximum one time grant of Rs 3 Lakhs/ per pond

Agreement:

- An agreement on a stamp paper with the Member Secretary, Kerala State Biodiversity Board, as the “first party” and the Secretary/President of the respective Residents Association/NGO/ Institutions as the second party is to be signed on approval of the project.

Disbursement of funds:

- Funds will be disbursed on signing of the agreement on stamp paper.
- The second party shall have a bank account opened (if not) in its name as soon as this agreement is signed and shall provide its Bank account number to the first party.
- Out of the total sanctioned budget of the project, 80% will be released immediately to the respective Residents Association/Institutions/NGO.
- 10% of the project cost may be earmarked for periodical maintenance.

Execution of work:

- The implementation of the project is the sole responsibility of the Residents Association / Peoples representatives / NGO / Organizations/ Institutions with technical advice from the KSBB.
- Conservation of ponds, maintenance of cleanliness, conservation of flora and fauna of the area etc should be carried out by the concerned party.
- Display boards describing the conservation slogan must be placed in vicinity as prescribed by the KSBB.

Admissible Methodology of restoration work:

a) Water management and pollution control

- Cleaning of the pond – Removal of plastic and other waste materials, draining out the polluted water, removal of clay and other weeds.
- Solid waste management can be considered as per the availability of space and resources.

b) Biodiversity conservation

- Water Plants – Based on the ecological conditions of the pond, controlled growth of different coloured Nymphaea and Nelumbium species can be promoted either in pots or in mud bottom.
- Fish Fingerlings – Based on the ecological conditions of the pond, fingerlings of suitable native fishes can be introduced. Exotic fishes are highly restricted.
- Medicinal Plants – If suitable land area is available, medicinal plants like Asoka, Neem, Tulsi, Adhatoda, *Vitex negundo* can be planted in the bank and surrounding area.
- Biodiversity enrichment in the area must be emphasized by introducing frogs, native fishes, plants etc.
- Beautification – Flowering plants to provide colour either in pots or on land can be planted according to the land availability.
- Sustainable residency - Sustainability models for wind, solar and biogas plants can be implemented according to the availability of space and resources.

Protection measures

- Biofencing is recommended in the banks especially with Vetiver, Pandanus and other riparian vegetation.
- Biocontrol – Invasive species can be controlled by biocontrol agents.
- Water weeds can be controlled using herbivorous fishes.

Accounting procedure

- The project has to be completed within the stipulated period of 45 days, failing which the whole amount with the penal interest has to be refunded to KSBB and the sole responsibility is vested with the President/Secretary of the respective Residents Association.
- On completion of the project, the expert committee will evaluate the project and issue the completion certificate.
- The President/Secretary of the respective Residents Association/ Peoples representatives/NGO/ Organizations/Institutions has to submit the completion certificate together with the audited Statement of Expenditure and Utilisation certificate to the KSBB, so as to release the balance amount and to settle the account.

Monitoring and evaluation of works:

- The maintenance and periodical cleaning of the pond can be entrusted to the Residents Association/ Biodiversity Club/ Eco club/ National Green Corps of the nearby College/Schools.
- Monitoring of the Project will be done by BMC of the LSG.

Expected measureable outcomes from the funded projects:

- Increased green space/ aquatic habitat
- Reduced damage from flooding during monsoon
- Increase water absorption through percolation
- Reduced water pollution
- Reduction in public health risks caused by polluted water
- Increased knowledge or awareness about water management

**FORMAT FOR SUBMITTING PROPOSAL FOR ECORESTORATION OF URBAN/
RURAL PONDS**

1.	Name of the Pond	
2	Location of Pond indicating district	
3	Legal status:	
4	Geographical coordinates	
	Area (in hectares)	
	Water spread area	
	Surrounding area	
	Total area	
5	Nodal agency with full Address, phone	
6	Topography	
	Ecological features	
	Threats	
	Biodiversity	
7	Benefits to residents	
8	Management interventions already undertaken	
9	Management interventions sought	
10	Any other relevant information	
11	Total project cost (Rs. in lakhs)	
12	Financial assistance required for Current Financial Year (Rs. in lakhs)	
13	Expected outcomes:	

Date

Seal

Signature
President/Secretary