



Develop a community-based Model Treatment system to Restore Water Quality of abandoned Open Well using Soil Biotechnology (SBT) and Copper Nanoparticle.



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Objective of project proposal

- Assess the water and environmental conditions of the abandoned Open well.
- Develop and design the miniature model SBT method and unit of Copper Nanoparticle to treat the water.
- Applying treated to water-specific use and monitoring the progress.
- Study the cost-benefits and socio-economic benefits of the treatment system.
- Develop policy and guidelines to restore and manage the used, unused abandoned open well.

Geography of implementation – Pichanur Panchayat, Madukarai Taluk, Coimbatore District, Tamil Nadu

Expected Number of Beneficiaries – Approx 500 families (1800 peoples), 3 faculties and 5 students

Methodology (Highlight aspects of knowledge sharing and community participation)

Review on process on different SBT methods, - Study on historical conditions used, unused and abandoned open well to understand the community dependence, relationships. Design suitable SBT plant for treating the contaminated from open well. – Assess the treatment plant efficiency, water quality, usability. – Quality of water further enhanced through nanoparticles units. – A capacity development program on design, use and maintenance of SBT and nanoparticles units. – Develop a guideline and policies to restore the open well and its functionality. – Report submissions.

Stakeholder roles and responsibilities

- The main stakeholders are the Pichanur village panchayat and people residing in the AD Colony of Pichanur panchayat they will support in implementation and management of treatment plant.
- PIs will explain the project to panchayat officials, other stakeholders. Local people will be involved in every stage of the projects to bring the ownerships.
- The PIs support in technology transfer to communities.

Potential impact (social, economic, environmental)

- ✓ Social: Under privileged communities of the village will be benefited.
- ✓ Economic: The treated water will be utilized for agricultural activities and home garden that improve the income of the communities.
- ✓ Environmental: Approach to solve the water crisis and efficient use of water at regional level.

Sustainability of the project

- ✓ The renovation of the unused well would be done in association with Pichanur panchayat that promotes the people ownerships.
- ✓ Panchayat will bear future running costs from their Panchayat Fund. So the maintenance and sustainability will be ensured.
- ✓ The model scalable to other regions of this panchayat by developing Industry-community participations (CSR programs)

Sl No	Expenditure Head	Cost
1	Electricity Cost	5000/-
2	Equipment/Machinery cost	50,000/-
3	Manpower Cost	10,000/-
4	Miscellaneous Expense	10,000/-
5	Running Cost	10,000/-
6	Site Preparation Cost	15,000/-
	Total	1,00,000/-