PROPOSALs (CUSTOMIZATION OF TECHNOLOGY)
Upper Cap Funding Rs.1,00,000

SEG Name	:	Liquid Waste Management
SEG Contact Details	:	Prof. Vivek Kumar, Indian Institute of Technology, Delhi
Proposal Id	:	C-15745/MH/SOL/LWMT/50K/1
Title of the Technology	:	Awareness and construction of soak pit
Amount Requested For	:	50000
Date of Proposal Submitted	:	15-07-2023
PI Contact Details	:	Swanand Gajanan Kulkarni, swanand293@gmail.com, 7875212835
State	:	Maharashtra
District	:	Solapur
Village Name	:	Korty
Current Status	:	Proposal assign to Expert for review

Proposal submitted by	Skn Sinhagad Colleg of Engineering Korti Tal Pandharpur Dist-Solapur	**RCI**	Indian Institute of Technology, Bombay (AISHE Code:-U-0306)
Name of College/Institution	Skn Sinhagad Colleg of Engineering Korti Tal Pandharpur Dist-Solapur (AISHE Code:-C-15745)	**State**	Maharashtra
District	Solapur	**Village Name**	Korty
Block		**Date of submission**	15-07-2023
Coordinator Name	Swanand Gajanan Kulkarni	**Email ID**	swanand293@gmail.com
Mobile No	7875212835	**Principal Investigator**	Mr Masal Arjun R
Email of Principal Investigator	arjun.masal@sknscoe.ac.in	**Mobile No of Principal Investigator**	8329353182

Proposal Overview

Subject Expert Group:	Liquid Waste Management
Title Of Technology:	Customization of Technology
Village where it is to be implemented	Korty

Objective	Wastewater disposal: Soak pits provide a simple and effective way to dispose of wastewater from toilets, sinks, showers, and other sources. The pit allows the wastewater to slowly percolate into the surrounding soil, where natural processes help to filter and purify the water. Groundwater recharge: Soak pits facilitate the replenishment of groundwater reserves. As the wastewater seeps into the soil, it recharges the groundwater, maintaining the water table and supporting the availability of water for wells and boreholes in the vicinity. Water pollution prevention: Soak pits help to prevent water pollution by ensuring that wastewater is properly treated and filtered before it enters the groundwater system. The soil acts as a natural filter, removing contaminants and impurities from the water as it percolates through the layers. Stormwater management: Soak pits can also be used for managing stormwater runoff. They collect rainwater from rooftops, paved surfaces, or other drainage systems and allow it to gradually infiltrate the soil, reducing the strain on local drainage systems and minimizing the risk of flooding. Sustainable and cost-effective solution: Soak pits are a relatively low-cost and environmentally friendly solution for wastewater disposal, particularly in areas where other alternatives like sewage treatment plants or sewer connections are not feasible or economically viable . It's important to note that the design, construction, and maintenance of soak pits should comply with local regulations and guidelines to ensure proper functioning and prevent any adverse impacts on the environment and public health.
Funds Raised from Gram Panchayat	Gram Panchayat
Details of the funds raised from other agencies	NO
Describe your role at various stage of the Project	1. To increase awareness regarding waste water management through innovatively designed soak pit to community, society and panchayat members 2. Students are involved in the programme for the modified design of soak pit as per design and theoretical concepts of designing. 3. We provide all adequate knowledge regarding soak pit to monitor and manage for community people and panchayat members. Community people and panchayat members can do so by raising monetary community contributions and tapping MGNREGA scheme from the taluka panchayat. 4. Institute students and faculty members are involved in design of soak pit, awareness to use present soak pit and providing proper guidance for proper utilization of soak pit

Describe your role at various stage of the project	The execution of a soak pit involves several steps. Here is a general outline of the process: Site selection: Choose an appropriate location for the soak pit. Consider factors such as the distance from water sources, buildings, and property boundaries. Also, assess the soil conditions to ensure proper percolation and groundwater recharge. Percolation test: Conduct a percolation test to determine the soil's permeability. This test helps determine the size and number of soak pits required for effective wastewater disposal. It involves digging test pits, filling them with water, and measuring the rate at which the water infiltrates into the soil. Excavation: Excavate a pit of suitable dimensions based on the percolation test results. The size of the pit will depend on factors such as the anticipated volume of wastewater, soil permeability, and local regulations. Infiltration area preparation: Create an infiltration area surrounding the soak pit. This area consists of a layer of loose stones or gravel that facilitates the percolation of water into the soil. The size of the infiltration area will depend on the design requirements and the anticipated volume of wastewater. Installation of inlet pipe: Install an inlet pipe from the source of wastewater to the soak pit. This pipe should have a gradient to allow gravity flow of wastewater. The pipe should be properly sealed to prevent leakage. Construction of the soak pit: Construct the soak pit using bricks, concrete rings, or other suitable materials. Ensure that the pit has a stable and watertight structure. The size and shape of the soak pit may vary depending on local regulations and design specifications. Backfilling: Backfill the area around the soak pit with a layer of loose stones or gravel. This helps to provide additional filtration and prevents soil erosion. Covering and venting: Cover the soak pit with a concrete slab or a suitable cover to prevent entry of debris or animals. Install a vent pipe to allow the escape of gases generated during the decomposition process. Diversion of wastewater: Redirect the wastewater from sources such as toilets, sinks, or drains to the soak pit inlet pipe using a network of pipes and fittings. Ensure proper slope and alignment of the pipes to allow smooth flow. Regular maintenance: Regularly inspect and maintain the soak pit to ensure its proper functioning. This may involve periodic desludging or emptying of accumulated sludge, clearing any blockages in the inlet or outlet pipes, and repairing any damaged components. It is essential to follow local regulations and guidelines and seek professional advice when designing and executing a soak pit to ensure its effectiveness and compliance with environmental and health standards.
Impact on village/ Beneficiaries	
How to maintain future sustainability of installed technology in the village	The burden of women (fetching water from faraway places) will decrease. The committee set up will take care of the soak pit in the future. Waste water management can be controlled by the soak pit. Availability of breeze air in the Society and village Provision of water closet and bath in every house is easy. Environment friendly and cleanness maintain bt this soak pit. Epidemics of disease are controlled by the soak pit. It can increase water (charge) table in underground.
Impact of this work on learning of Students /Teacher	The direct impact of soak pits on students may be limited, as soak pits primarily focus on wastewater management and environmental considerations. However, there can be indirect impacts on students' well-being and educational experiences. Here are some potential indirect impacts of soak pits on students: Health and hygiene: Soak pits contribute to improved sanitation and hygiene in the village. By effectively managing wastewater, soak pits help reduce the risk of waterborne diseases. This can have a positive impact on students' health, reducing the likelihood of illnesses that could lead to absenteeism and missed educational opportunities.
Role of PI after compilation of the project duration	To monitor & Work distribution
Supporting Document	View Document View Prototype View Prototype

Total cost of the Product / Technology

S.No	Categories of Fund	Total cost of the Product / Technology
1	Site Preparation Cost	5000
2	Equipment/Machinery cost	15000
3	Running Cost	5000
4	Manpower Cost	20000
5	Electricity Cost	3000
6	Miscellaneous Expense	2000
Total		50000

Observation / Comments

Comment By SEG	Dear Expert We seek your expert advice in reviewing the proposal on construction of soak pit for effective management of wastewater from toilets, kitchen and bathroom, etc. Date:02-10-2023
Comment By PI	All documents are submitted. Please verify. Date:15-07-2023