

SUSTAINABLE ENVIRONMENT

SL.NO	Problem Statement	Description	SDG Goals
Software			
01	Carbon Footprint Tracker for Individuals and Communities	Build a mobile app that calculates and helps reduce carbon footprint based on travel, diet, and electricity usage	11,13,12
02	Water Usage and Leak Detection Dashboard	Design a real-time app for apartment complexes or villages to monitor, alert, and analyze water usage trends.	06,09
03	Virtual Forest App	Users plant digital trees by completing sustainability tasks. Real plantations happen via partnered NGOs.	15,17
04	Green Shop Finder	Build an app that lists and rates local vendors based on eco-friendly practices and zero-waste efforts.	12,11
05	Smart Farming Advisory System	Create a platform to advise farmers on crop rotation, organic inputs, and rain harvesting based on satellite and soil data.	02,13,15
06	Food Waste Mapping App	Connect restaurants, hostels, and homes to NGOs for timely food donation, minimizing edible waste.	02,12
07	Smart Sanitation Map for Women	Build a real-time app that maps women-friendly toilets, their hygiene status, presence of baby care facilities, and safety scores (crowdsourced).	05,06,11
08	Green Period Tracker & Reusables Advisor	Promote eco-friendly menstrual hygiene through an app that tracks cycles and suggests reusable options (cloth pads, cups) with nearby purchase points.	03,05,12
09	Digital Exchange Platform for Reusable Packaging Materials.	Businesses and individuals often discard reusable packaging like bubble wrap, boxes, or containers after a single use, contributing to unnecessary waste	12,11,13
10	Smart Expiry Tracker for Food Items	A significant amount of food is wasted because people forget expiry dates, especially for refrigerated and packed items.	02,12,03
Hardware			
01	IoT-Enabled Composting Bin	Build a smart compost bin for homes that monitors humidity and heat for better organic waste decomposition.	11,12
02	Plastic Shredder for Community Recycling Units	Design a low-cost machine to shred plastic into usable material for eco-brick manufacturing.	09,14,12

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03	Solar-Powered Water Purifier	A rural-friendly filtration device using solar panels and basic UV/charcoal filters.	06,07,03
04	Greywater Reuse Unit for Toilets	Develop a system that recycles washbasin and shower water for toilet flushing in homes.	06,11
05	Low-Cost Air Quality Monitor	Build an open-source indoor and outdoor pollution detection system with community display boards.	03,11,13
06	Vertical Farming Kit for Urban Homes	Design a compact, smart gardening system with auto-watering and light control.	02,11,15
07	E-Waste Sorting and Grading Unit	A device using basic sensors to separate PCB, batteries, plastics from dumped electronics.	12,09,11
08	Eco-Safe Sanitary Pad Disposal Box for Hostels/Slums	Create a solar-powered pad incinerator with odor control and user feedback via LEDs (clean/full/error), designed for community toilets or rural areas.	03,05,07,11
09	Women-Only Solar Night Bus Stop Booths	Design bus stop enclosures with solar-powered lighting, CCTV, panic button, and auto-notify nearby patrol vans in case of distress.	05,07,11,16
10	Smart Organic Waste Dehydrator for Homes and Hostels	In many homes, hostels, and canteens, wet organic waste creates foul smell, attracts pests, and is difficult to compost due to lack of proper drying or treatment.	12,11,13,03