Ministry of Environment, Forest & Climate Change
Government of India
Ideas4LiFE - List of Winning Ideas in each of the seven themes of Mission LiFE

Theme 1: SAVE ENERGY						
Award	**Idea ID**	**Idea Title**	**Idea description**	**Participants**	**Category of participation**	**Name of Institution**
First	1303	Sustainable, affordable, modular, domestic solar cooker	Sustainable, affordable, modular, domestic solar cooker - By utilizing renewable solar energy, it significantly reduces greenhouse gas emissions, deforestation, and dependence on fossil fuels, all while minimizing waste as solar cooker is made from reused materials	1. Dr. Makarand M Lokhande 2. Dr. Prakash S Kulkarni 3. Dr. P.D. Sawarkar	Team	Visvesvaraya National Institute of Technology, Nagpur
Second	997	Vertical Farming	Vertical farming using hydroponics — a method of growing plants without soil by submerging their roots in nutrient-rich solutions containing essential elements presents a sustainable and efficient solution with energy savings to modern agricultural challenges while optimising land use.	1. Aditya Kumar	Individual	Deen Dayal Upadhyaya, Gorakhpur University, Gorakhpur, UP

Third	1388	Cost-Effective Solar Tracker with Carbon Nanotube Actuators	Low cost non-electrical Solar tracker using carbon nanotube (CNT) actuators. The temperature difference between the reactors triggers the actuator to track the sun's movement, optimizing solar panel positioning for maximum efficiency. Cost Effective & energy efficient.	1. Dr. M Boopalan	Individual	Pachaiyappa's College for Men Kanchipuram, Tamil Nadu
Theme 2: SAVE WATER						
Award	**Idea ID**	**Idea Title**	**Idea description**	**Participants**	**Category of participation**	**Name of Institution**
First	1038	Reducing Water Footprint Using Raw Sewage during Hydrothermal Carbonization	Reducing Water Footprint for Producing Lignocellulosic Hydrochar. Using Raw Municipal Sewage as Moisture Source during Hydrothermal Carbonization. Can reduce freshwater dependency and Integrates waste management with renewable energy production.	1. Rajarshi Bhar 2. Joydeepa Taran 3. Anil 4. Prof. Brajesh Kumar Dubey	Team	Department of Civil Engineering IIT Kharagpur, West Bengal
Second	715	Micro Algae approach-Infectious Pathogens and antibiotic remediation from waste-water	Using microalgae to remove infectious pathogens and antibiotics from wastewater presents a promising solution to the challenges faced by conventional wastewater treatment plants.	1. Dr. Chita Ranjan Sahoo 2. Dr. Rajesh Mohanta 3. Ms.Suvasree Bej 4. Dr. Debdutta Bhattacharya 5. Ms.Satarupa Satapathy	Team	ICMR-Regional Medical Research Centre, Bhubaneswar, Ministry of Health & Family Welfare, Govt. of India, Bhubaneswar, Odisha

Third	1355	HydroSoleil: for Sustainable Water Treatment	Developing an Integrated Photocatalytic-Self-Fenton-PS System with Biopolymeric Hydrogels that facilitates hybrid oxidation for Sustainable Water Treatment	1. Johan Biju Thomas 2. Mohammad Shahzad T.S. 3. Raees 4. Nevin Monson Mathew	Team	Sustainable Catalysis Research Group, Department of Chemical Engineering, SAINTGITS College of Engineering , Kottayam, Kerala
Theme 3: SAY NO TO SINGLE USE PLASTICS						
Award	**Idea ID**	**Idea Title**	**Idea description**	**Participants**	**Category of participation**	**Name of Institution**
First	1331	Enviwrap Straws – Durable and eco-friendly straws from coconut leaf	Using biodegradable Coconut Leaf Straws as a replacement to Plastic Straw, a major pollutant that release toxins like BPA into beverages and to paper straws that lack durability.	1. Surya V 2. Jaikant AP	Team	PSG College of Arts & Science, Coimbatore, Tamil Nadu
Second	729	"The Missed Edge" - small plastic edges cut from milk packets	A behaviour change proposal with creative messaging and designing of milk/chips packets. Nudges users not to cut the plastic packets small edge and changes in packaging at manufacturing level.	1. Unnati Kashyap 2. Venkatesh U	Team	Indian Institute Of Technology, Roorkee
Third	1305	GREENIVA - Biodegradable Food Counter	Packaging and cutlery made from agricultural waste including sugarcane bagasse and banana leftovers, which can replace single use plastic cutlery.	1. Riya Jain	Individual	PDPM Indian Institute of Information Technology Design & Manufacturing, Jabalpur, Madhya Pradesh

Theme 4: ADOPT SUSTAINABLE FOOD SYSTEMS						
Award	**Idea ID**	**Idea Title**	**Idea description**	**Participants**	**Category of participation**	**Name of Institution**
First	1285	LASER Razor	A Green ND-YAG (Non-destructive Yttrium aluminium garnet) laser technology working on photochemical and photothermal principle as a safe and environment friendly way to deal with insects, pests, fungus.	1. Rohit Kushwaha 2. Prof Dr. Ir D M Denis 3. Prof S. Khandika	Team	Sam Higginbottom University of Agriculture Technology and Sciences, Prayagraj, Uttar Pradesh
Second	1344	Tomato Rind	Tomato Rind: A sustainable, non-toxic bio-aromatic liquid, derived from regenerative resources, which is especially blended and coated as outer layer of tomatoes to enhance their shelf life.	1. Vijayakumar S 2. Sabareesh S 3. Nijanthan VR	Team	PSG College of Arts & Science, Coimbatore, Tamil Nadu
Third	955	AI-Powered Pest Detection and Organic Control System	AI powered Pest Detection using infrared and acoustic sensors and Organic Control System such as pheromone and kairomone traps. AI facilitates accurate detection for targeted control.	1. Shivam Satyawan Madrewar 2. Purva Wankhade	Team	Mahatma Phule Krushi Vidyapeeth Rahuri, AhmedNagar, Maharashtra
Theme 5: REDUCE WASTE						
Award	**Idea ID**	**Idea Title**	**Idea description**	**Participants**	**Category of participation**	**Name of Institution**
First	1239	EcoSynth-Naturally synthesized,	Generating Value from Trash. Using six agro waste materials to develop bio-	1. Anushka Bhaskar Waghmare 2.Vaibhav Ravindra	Team	Shri Mathuradas Mohota College of

		one blend at a time	composites which is sustainable, light weight, durable, cost effective and have high plasticity.	Khanorkar 3. Vrushti Ashok Urkude 4. Shamali Dilip Khalatkar		Science, Nagpur, Maharashtra
Second	985	Renew Blue- AI based Floating Trash Can	AI-powered floating trash-can to clean water bodies and fight marine pollution. Powered by renewable energy using ocean currents and solar, it can be deployed in remote settings. Autonomously detects, collects and sort waste from water surface.	1.Dhruv Sharda	Individual	Amity International School, Sector 1, Vasundhara, Uttar Pradesh
Third	1283	Banana Trichoderma Nexus: A Zero Waste Model	Waste to Wealth- zero-waste model utilizing whole of banana plant from 'TOP TO TOE' after fruit harvesting which includes Trichoderma farming, Floating vegetable farming using banana pseudostem, banana leaf powder for seed treatment, etc.	1. Rohit Kushwaha 2. Dr. Shikha Singh	Team	Sam Higginbottom University of Agriculture, Technology and Sciences, Prayagraj, Uttar Pradesh
Theme 6: ADOPT HEALTHY LIFESTYLES						
Award	**Idea ID**	**Idea Title**	**Idea description**	**Participants**	**Category of participation**	**Name of Institution**
First	479	Nonwoven fabric composite hydrogel	Nonwoven fabric composite hydrogel wound dressing prepared from Centella Asiatica extract (Gotu kola	1.Piyali Khamkat	Individual	Brainware University, Barasat, Kolkata, West Bengal

		wound dressing prepared from Centella asiatica extract for the treatment of bacterial infection	or Thankuni Pata), a natural and sustainable solution for treating bacterial infections. Promising alternative to synthetic antibiotics.			
Second	498	AI-based app for developing a food regime for well being	Healthy Food and Wellbeing through technology: AI-based app for developing a food regime based on age, gender, physiological, pathological, or cultural identity, with emphasis on traditional medicinal knowledge.	1. Arun Upadhyay	Individual	Indian Institute of Technology, Bhilai
Third	756	Herbal and eco-friendly mosquito control	An eco-friendly herbal incense sticks formulated using extracts of Pudina (Mentha spicata), Neem (Azadirachta indica), and menthol for use as mosquito-repellent.	1. Rina Mondal	Individual	Seva Milani High School (H.S.) Seva 142/4 Netaji Road, Khagra, Murshidabad, West Bengal
Theme 7: REDUCE E-WASTE						
Award	**Idea ID**	**Idea Title**	**Idea description**	**Participants**	**Category of participation**	**Name of Institution**
First	1374	Controlling E-waste through Multi-modal Approach	E-waste management through a multi-modal approach including use of organic semiconductors, modular designs, circular economy model based on the	1.Sarvar Singh	Individual	Indian Institute of Technology Jodhpur

			3Rs—Reuse, Refurbish, and Recycle—along with supportive government policies.			
Second	802	Solar Powered Smart Blind Stick Using E-Waste	Addressing mobility challenges for Visually Impaired. The device uses ultrasonic sensors for obstacle detection, buzzers and vibrators for feedback, an Arduino Uno microcontroller for operation, and a solar panel for eco-friendly charging.	1. Hemlata Joshi 2. Ritik 3. Deepanshu Bhardwaj 4. Rahul Kumar Maurya 5. Pawan	Team	Dr. H J BHABHA ITI, Mayur Vihar, Delhi
Third	1364	Reusing mobile & laptop processors to reduce e-waste	Reusing the processors of old electronic devices (mobile/laptops) to their full capacity for functions which require less computation power rather than recycling for materials to avoid e-waste.	Aniyaliya Satyam Bharatbhai	Individual	Indian Institute of Information Technology, Vadodara