



Office of the Principal Scientific Adviser  
to the Government of India

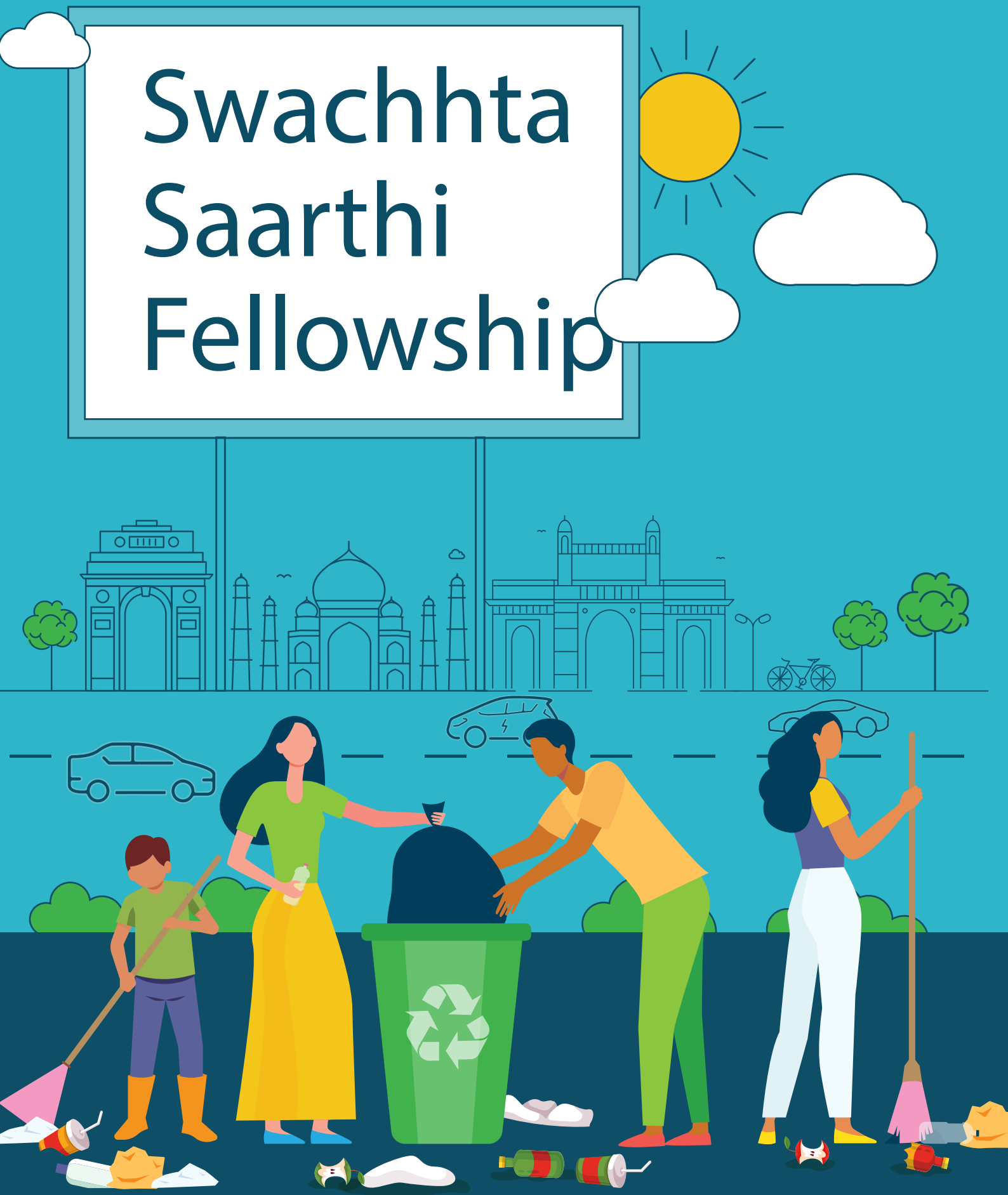


**WASTE  
TO WEALTH**  
Swachh Bharat Unnat Bharat



**INVEST INDIA**  
NATIONAL INVESTMENT PROMOTION  
AND FACILITATION AGENCY

# Swachhhta Saarthi Fellowship



[www.wastetowealth.gov.in](http://www.wastetowealth.gov.in)

# Swachhta Saarthi Fellowship

Prof. Ajay Kumar Sood,  
Principal Scientific Adviser to the Government of India, said



"The Swachhta Saarthis act as torch bearers of our nation by engaging the public through awareness campaigns of waste management."

Dr. (Mrs.) Parvinder Maini

Scientific Secretary, Office of the Principal Scientific Adviser to the Government of India



This Fellowship is a platform to recognize citizens who go beyond the call of duty to develop innovative solutions for waste management and engage in community demonstration for a larger cause.

Dr. Monoranjan Mohanty

Adviser/Scientist G, Office of the Principal Scientific Adviser to the Government of India



The role of these fellows is the key to sensitizing the community towards waste management with innovative solutions.

Malyaj Varmani

Vice President, Invest India



Engaging the community through collective action and generating awareness about the core impact of waste management efforts is key.

## 1 Category A



Open to school students from 9<sup>th</sup> to 12<sup>th</sup> standards engaged in waste management community work

## 2 Category B



Open to college students (UG, PG, research students) engaged in waste management community work

## 3 Category C



Open to (i) citizens working in the community and through self help groups and (ii) municipal or sanitary workers working beyond specifications of their job requirement/descriptions

## FELLOWSHIP OVERVIEW

In February 2021

The Office of the Principal Scientific Adviser to the Government of India, under its "Waste to Wealth" Mission, invited applications for the Swachhta Saarthi Fellowship to recognize students,



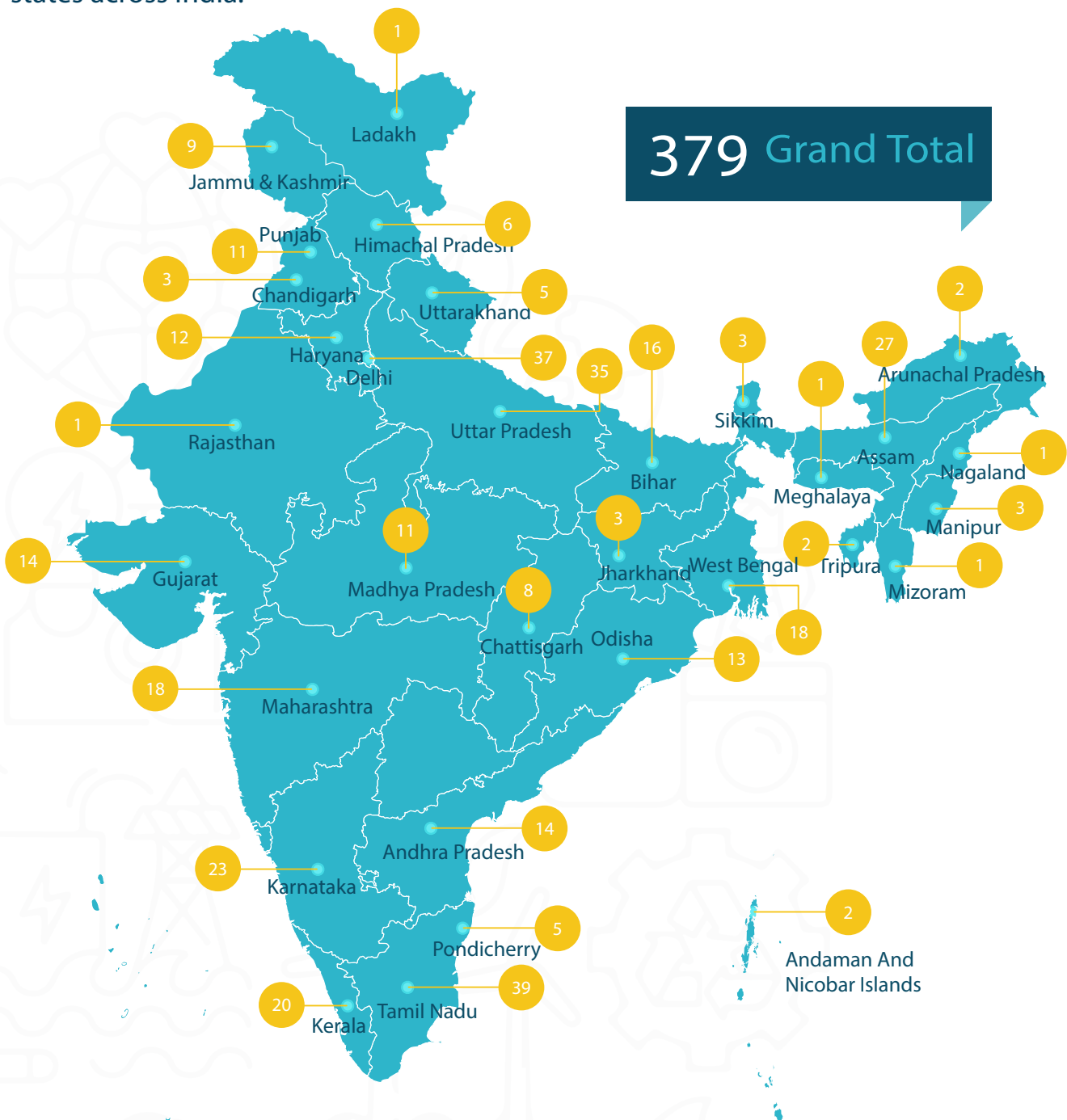
community workers/self help groups, and municipal/sanitary workers who are engaged in tackling the enormous challenge of waste management, scientifically and sustainably. The three categories of awards under the fellowship program are as below:

The fellows (SSF) selected under the three categories are now being supported with monthly fellowships of INR 500/-, INR 1,000/- and INR 2,000/- respectively for a period of one year

A total of 1062 applications were received from across the country for the 2021 Cohort (from Jammu & Kashmir, Ladakh, Tamil Nadu, Mizoram, Gujarat, the Andaman & Nicobar Islands, and more). Out of the 1062 applications, 379 SSFs were selected from 27 states and 6 union territories (UTs) based on their proposed ideas and action plans to tackle the challenge of waste management, scientifically and sustainably.

The aim is to inspire more and more such young citizens and community workers to participate in this fellowship program to create value from waste around them through their innovations. For more details, visit our promotional video on YouTube ([https://www.youtube.com/watch?v=tt\\_GzRVAOkU](https://www.youtube.com/watch?v=tt_GzRVAOkU)).

The 379 SSFs in the Swachhta Saarthi Fellowship 2021 Cohort are from the following states across India:



For more details, visit our promotional video on YouTube:



[www.youtube.com/watch?v=tt\\_GzRVAOkU](https://www.youtube.com/watch?v=tt_GzRVAOkU)

The applications for the 2022 Cohort were open for submission till 4<sup>th</sup> May 2022. A total of 1290 applications were received from 28 states and 5 UTs. Up to 500 fellows will be awarded in 2022. The aim is to further empower and recognise the efforts of young innovators engaged in the community work of waste management. The goal is also to form a wide network of waste warriors on the ground as Swachhta Saarthis.

For more information, please visit:



[www.wastetowealth.gov.in/fellowship-home](http://www.wastetowealth.gov.in/fellowship-home)

## Swachhta Saarthi Samvaad

On the 14<sup>th</sup> of every month, we host the 'Swachhta Saarthi Samvaad', a live interaction with ambassadors within the waste management community to enlighten the SSFs about the opportunities within the space and the potential to implement action sustainably within their communities. We have successfully hosted 12 Swachhta Saarthi Samvaads with experts from the waste management domain:

- 1 Live interaction with former Principal Scientific Adviser, Prof. K. VijayRaghavan in August 2021
- 2 Discussion on Reducing Waste Streams in India with Sudhara in September 2021
- 3 Overview on Startup Ecosystem with three waste management startup founders and Startup India in October 2021
- 4 Overview on Carbon Credit and Sustainable Future of India with Enking International in November 2021
- 5 Strategic Research Insights and Reports with Invest India in December 2021
- 6 Overview on Plastic Waste Management and Municipal Solid Waste Segregation with Triotap Technologies and E3WasteSolutions in January 2022
- 7 Impact of Waste Management on Climate Change, Technologies and Facilities with GIZ in February 2022
- 8 Water and Sanitation: Stories from Small Indian Towns with BORDA in March 2022
- 9 W2W Overview and Fellowship Impact with W2W Mission in April 2022
- 10 Insights on Swachhta Bharat Mission with Swachh Bharat Mission, Ministry of Housing and Urban Affairs in May 2022
- 11 Insights on Waste Management Initiatives in Assam with The Midway journey in June 2022
- 12 Insights on Creating Dense Self-Sustaining Forests with Afforrestt in July 2022

# Meet our Swachhta Saarthis



Arya Pangging

Arunachal Pradesh

SSF Category: A

SSF ID: A/6

I have collected 5.5 kg of human hair from the barbershops and utilised 200 kg of fresh cow dung for making compost. I have undertaken lab tests of hair-based vermicompost periodically with a bamboo-based sieve followed by sun drying and packaging. The results have been shared for deployment at field with local farmers in Assam and Arunachal Pradesh through awareness pamphlets.



I have made disposable biodegradable plates and glasses by using solid and organic waste in an eco-friendly process. This process reduces energy and will decrease the use of non-biodegradable plates like those made from thermocole.

S. Rehaan



New Delhi

SSF Category: A

SSF ID: A/109



Thanushri

Pondicherry

SSF Category: A

SSF ID: A/56



My work involved biosynthesis of ZnO Nanoparticles using cow dung waste and to use biogenic ZnO Nanoparticle as pesticide for the control of agro pathogens. For this, fresh cow dung was collected from the locally available dairy farms and the moisture content was removed by drying in the shade. I have conducted various studies and tests with dried cow dung to strengthen my research with real results.



I converted banana peels to biochar using organic waste. This allowed me to manage my waste at home and inspire others.

Hanshika Sati



Haryana

SSF Category: B

SSF ID: B/118



**Aditi Bhardwaj**

Uttar Pradesh

SSF Category: A

SSF ID: A/96



I organised trips to Gaighat Ganga River, Yamuna River and Vrindavan for awareness on household waste management. To reach a larger audience, I raised awareness within my neighbouring communities through pamphlets, signages and poetry.



I helped in creating awareness by educating community members on vermicomposting and its process of development at home, sharing government schemes of kitchen garden and methodology of segregation of kitchen waste. Due to my efforts of forming Swachhata Sarathi Clubs in neighbouring communities, 25 applications have been submitted to State Government of Bihar for setting up Kitchen Gardens.

**Aditya Thakur**

Bihar

SSF Category: A

SSF ID: A/59



**Akshat Tripathi**

Uttar Pradesh

SSF Category: A

SSF ID: A/57



I have organized social awareness programs in my neighbourhood and school by sharing posters and detailed presentations on the hazards of plastic waste along with steps to avoid its usage. With the knowledge gained through this fellowship, I have developed a Smart Waste Collection and Management platform.



I have used domestic waste like waste papers, empty packets and unused material at home for making recyclable products. It has helped me a lot in creating awareness in my neighbourhood on household waste and its various uses.

**Anjali Devi**

Uttar Pradesh

SSF Category: A

SSF ID: A/98







## Anukriti Dixit

Uttar Pradesh

SSF Category: A

SSF ID: A/99



I have organised many awareness programmes in my village and cleanliness drives at school. My work has motivated many students to participate in waste management activities and allowed me to teach them ways to convert waste into wealth.



## Anupam Singh Baghel

I have made vermicompost manure from wet garbage to be used as manure in agricultural fields. The wastewater generated has also been used as manure. To ensure wealth generation, we have separated methane gas by decomposing wet garbage and used it as fuel.



Chhattisgarh

SSF Category: A

SSF ID: A/068



## Anushka Srivastava



Uttar Pradesh

SSF Category: A

SSF ID: A/64

I have surveyed people in my community such as shopkeepers, workers, cleaners and common passer-by's to raise awareness on waste management. I have also kept an e-waste box in my society and school so that people can dispose of their e-waste appropriately. This has allowed me to connect with local waste collectors and recyclers for proper management of e-waste.



In pursuit of ensuring "Waste to Wealth", I strived dedicatedly to apprise the members of my school of the negative effects of e-waste, and plastic waste to the environment. I have held various online sessions such as "Bottle to Broom", "Single-use Plastics - The Threats and Alternatives" and "Banning the Use of Single-Use Plastics" with community members, administrative staff and school peers. The aim was to increase awareness and sensitise my community on the importance of waste management.

## Arryan Chitkara

Chandigarh

SSF Category: A

SSF ID: A/107





## Kashyapi Mondal

I have worked on green energy solutions by experimenting with different membranes to create energy efficient devices. I have done several tests on different size and shape of the electrode. My aim is to create a Green Energy Garbage Bin (GEG) to overcome waste management problems and produce electricity at the same time. I have given 25 sample prototypes to 25 households to understand the conversion of food waste to energy.

Assam

SSF Category: A

SSF ID: A/9



I have created impact in my neighbourhood and school by raising awareness on the importance of garbage-free communities. I have unblocked a drain in my colony which was covered in huge piles of garbage thereby making it functional. With support of my community, I have encouraged more peers to make briquettes out of waste collected.

## Arya Swaroop

Delhi

SSF Category: A

SSF ID: A/11



## Ashish Vijay

Kerala

SSF Category: A

SSF ID: A/15



I have used old coconut shells, bottles, wastepaper, and old cycle tyres for making beautiful and useful recyclable items.



I have worked on a sustainable methodology of farming which can be used in the future, nationwide. This method will use 60% -70% less water than traditional farming methods making it extremely economical and less labour intensive



## Aviral sahu

Chhattisgarh

SSF Category: A

SSF ID: A/104





Banita Dash

Madhya Pradesh

SSF Category: A

SSF ID: A/72



I have participated in Swachhta rallies and organised workshops to inspire my peers on converting waste to wealth. I have used chocolate wrappers, biscuits wrappers, sweet cans and wastepaper to make flowerpots. I have also used pen refills to make bracelets for my family and friends.



I have learnt how to manage my household waste and convert it into wealth. This has improved me to manage my waste effectively and motivate my peers to do the same.

G P Pavani

Telangana

SSF Category: A

SSF ID: A/053



Ishita Chaudhary

Uttar Pradesh

SSF Category: A

SSF ID: A/70



I have undertaken surveys to understand the amount of waste generated in my community and people's perception of waste. This has allowed me to make a small environment friendly machine prototype to raise awareness. I have even circulated posters highlighting the importance of plastic waste.



SVM mapping at the premise level. Comprehension Asset and utility mapping was done in the society with people and places making sure bylaws and rules are understood by policy interpretations.

Meet Shah

Gujarat

SSF Category: B

SSF ID: B/180





Katravath Prathusha  
Rathod

Telangana

SSF Category: A

SSF ID: A/048



I have organised cleanliness and waste management drives for children in my neighbourhood to raise awareness. Also, have used wastepaper to create recyclable products.



Lakshmi Shruti Karri

I have used solid waste to generate electricity and it has been very helpful for rural people in India who are living without electricity.

Chhattisgarh

SSF Category: A

SSF ID: A/87



Manashjyoti  
Konwar

Assam

SSF Category: A

SSF ID: A/14



I used wastepaper in making recyclable products that is helpful at a household level and can be replicated by my peers with ease



Naman Singh Baghel

I used organic waste manures for protecting the banana trees and multiplying their numbers. I use rock strips, and porous soil to cover the tree in addition to cow dung and excreta.

Madhya  
Pradesh

SSF Category: A

SSF ID: A/20





Naveen Kumar  
Prajapati

Uttar Pradesh

SSF Category: A

SSF ID: A/080



I have inspired many woman living in my community to plant more trees in the area and raise awareness on waste management.



Nihar Malhotra



Delhi

SSF Category: A

SSF ID: A/13

I have educated my family and peers on the importance of water conservation. To promote this mindset, I created a mechanism to regularly interact with the domestic helps within my society to ensure water is not being wasted during cooking and washing. I even implemented a drip irrigation system at school to reduce water wastage.



Chandana. S



Kolar

SSF Category: A

SSF ID: A/122



I have made a filter that can be used to filter the sewage water at home so that it can be used for watering plants and for cleaning purposes.



Rakshita Yadav



Delhi

SSF Category: A

SSF ID: A/50

I have held several online and offline activities for my peers and middle school children to raise awareness on climate change, reusing waste products (such as ice cream sticks, cardboard boxes), segregating waste and cleanliness drives. The aim has been to reduce, reuse and recycle waste by generating more awareness.







## S. Rehaan

South West  
Delhi

SSF Category: A

SSF ID: A/109



I have made disposable and biodegradable plates along with cups from rice straw and recycled paper. The cellulose was separated from rice straws and was mixed with recycled wastepaper to convert into cups. I have done several Biodegradability tests and used various material to test the durability of different material cups such as honeybee wax and biofilm. I have even organized waste management awareness campaigns for school students.



I made recyclable products out of waste and conducted awareness drives within my community to raise awareness on waste management.

## Shivam Shivani

Bihar

SSF Category: A

SSF ID: A/66



## Shristi Soni

Madhya Pradesh

SSF Category: A

SSF ID: A/105



I have inspired my peers, family and community members to convert waste to wealth by planting in waste bottles, using coconut shells as decorative items and making pen stands from wastepaper among other things.



I have used many ways through which domestic waste can be converted into wealth in our home and neighbourhood by raising awareness on converting kitchen waste into manure, among other things.

## Sonali Verma

Uttar Pradesh  
Ghaziabad

SSF Category: A

SSF ID: A/73







## Aadil Ashraf

Delhi

SSF Category: B

SSF ID: B/97



Through the span of 1 year, I worked majorly on sensitizing local people and students to work and collaborate to curb the waste around us. Nukkad nataks and drives are organised to engage residents, civilians, and students to work majorly on plantation drives, cleanliness drives, and awareness programs which were recognized by officials as well.



My goal of working for SSF was to collect different types of fruits and vegetables from the domestic municipality market. After reaching the end of my work, I successfully achieved bioelectricity from waste and research was done in reducing waste by innovative futuristic methods in generating electricity.



## Abubakkar Siddik

Tamil Nadu  
Madurai

SSF Category: B

SSF ID: B/90



## Aditaya Raj Paridwal

Gujarat

SSF Category: B

SSF ID: B/98



I took nine, in-person seminars, in which I shared knowledge on "Handling waste Electronics" along with conducting webinars making schools, companies and universities understand the value of handling, recycling and reusing of e-waste. From collecting e-waste and sending it to the certified e-waste recyclers nearby, to taking public's waste and sending it to recyclers.



I worked on the cultivation of blue oyster mushroom under the sub-tropical zone of Himachal Pradesh. The objective was to measure its growth and evaluate different grain spawn substrates to produce this. Studying the suitability of different locally available substrates for the cultivation of this mushroom.



## Aditya Bhatia

Haryana

SSF Category: B

SSF ID: B/128





## Adya Isha

Delhi

SSF Category: B

SSF ID: B/49

After a comparative analysis between different techniques used to manage municipal solid waste, I analysed the greenhouse gas effect by this waste generated in different states of India. We segregated organic waste inside IIT Delhi campus and developed a pilot-scale plant for biogas production, producing 25 cubic meters of biogas on daily basis



## Ahilya B Njarukulam

I used the application of polyurethane, a class of polymers composed of organic units joined by carbamate links in different pavement constructions. Therefore, using plastic wastes to construct pavements!

Kerela

SSF Category: B

SSF ID: B/24



## Aishwarya Kumbar

Karnataka

SSF Category: B

SSF ID: B/108



I held awareness campaigns about e-waste through home visits and interactions. Questionnaires were developed, programmes were organized, and priority was given for the separation of e-waste from solid/municipal waste. Amongst these, disposal practices, creation of useful items from domestically available e-waste, house-to-house visits to provide knowledge on the same, distribution of pamphlets and brochures were made.



We have cleaned a river known as Pallikal River in Kerela and collected plastics and other wastes on a monthly basis. We conducted cleaning drives of public spaces including seashores, roads etc. and held awareness programmes and supplied study materials to children by using the money received from the sale of plastics into scrap shop.

## Ajmal .A

Kerela

SSF Category: B

SSF ID: B/25





## Amalesh Adhikary

Assam

SSF Category: B

SSF ID: B/33



After developing a production unit, a demonstration model and produced vermicompost, quality control of the compost was done and awareness and training programmes in cooperation with KVK, Baksa took place. Along with promoting organic farming at a small scale using vermicompost instead of chemical fertilizers



I held an awareness campaign regarding e-waste in my community. I went for a nearby field visit to the village for awareness for greener methods and e-waste management.



## Amrita Preetam

Delhi

SSF Category: B

SSF ID: B/57



## Ashika Prakash

Delhi

SSF Category: B

SSF ID: B/115



Along with explaining the importance of recycling plastic waste, I conducted clean up drives in the neighbourhoods therefore reducing the waste that goes out of the houses. I have also recycled used wine, coffee, honey bottles, empty cardboard boxes into decorative items with children and colony people.



I took discarded masks and stitched them to make planters, wherein various kinds of seeds were planted and then transplanted into open grounds as part of the tea plantation drives organised in Air Force stations like Coimbatore, New Delhi and Assam. The awareness projects have also shown immense success.



## Ashima Jha

Delhi

SSF Category: B

SSF ID: B/136





Atchaya Ashok

Tamil Nadu

SSF Category: B

SSF ID: B/ 91



I have conducted awareness programmes on waste management, educating the masses around me in practises of waste segregation and clean up drives.



A User Interface was built for the application of managing waste in an efficient way. Organized an event online making sure good minds participate in it and distributed e-certificates issued by Amity Eco Club to the winners



Atul Singh



Uttar Pradesh

SSF Category: B

SSF ID: 156



Bhuvan Luthra

Delhi

SSF Category: B

SSF ID: B/26



I made Onion Peel Bio-Enzyme using banana peel tonics for supplementing growth of healthy plants, made natural insecticides, recycled old food containers and other things. Organised a workshop at Amity University and Doon Public School to teach fellow classmates to make vermicompost and the like.



I studied the growth of a mixed coalition of microalgae in urinal water as an approach to promoting ecological sanitation - Ecosan. After the installation of 1000 L algal ponds, we recovered 90% ammonium, nitrate, and almost 100% phosphate ions resulting in 1500 g of dried algal biomass.



Bunushree Behera



Odisha

SSF Category: B

SSF ID: B/86





Deepak Ranjan

Haryana

SSF Category: B

SSF ID: B/155



I made solid waste to vermicompost after speaking to the farmers. I also participated in the International Conference of Biotechnology, based on wastes, energy, agriculture and sustainability and wrote research papers related to the concept of circular economy.



Dekketi G C Vikram Reddy

I used rice straw collection with the Technology Selection Moisture Preliminary Analysis for pyrolysis and learnt the fast effects of red mud on the pyrolysis.

Andhra Pradesh

SSF Category: B

SSF ID: B/16



Devanshi Shah

Gujarat

SSF Category: B

SSF ID: 21-B/181



I had conducted a survey on the use of social media to raise awareness with its reach being high. I even assisted AMC in cleaning the public areas in my neighbourhood and visited a smart public toilet in my city to learn about its advantages.



After covering villages and panchayat areas to speak with students and members of the society directly, I understood their awareness and shared my knowledge as per their requirements.

Drishti Mukherjee

West Bengal

SSF Category: B

SSF ID: B/191







Esakkimuthu M

Tamil Nadu

SSF Category: B

SSF ID: B/92



The main aim of the project is to reduce, recycle and reuse the waste in and around surroundings areas. I developed a prototype that generates electricity from plastic waste. The project is based on the plastic bottles to identify the proper way of collecting wastes with the help of industrial support. We organized several awareness programs to engage the masses too.



Waste Management through kitchen garden via organic farming was practised during the period of lockdown. We prepared natural Bio-Enzyme cleaners from organic waste and launched this start-up business idea to help isolate bacteria from solid waste compost units.



Gauri Jindal

Punjab

SSF Category: B

SSF ID: B/101



GOPI J

Tamil Nadu

SSF Category: B

SSF ID: B/52



A prototype was made from organic wastes such as Banana peels along with glycerine, vinegar and water.



Greeshma Odukkathil

Collection and segregation of sanitary napkins from my residential area was done. After the collection was processed, the lab scale digester made compost. Biogas was produced and 5 Plastics were converted to fuel, oil and char along with producing 50 L of anaerobic digester for waste treatment.



Tamil Nadu

SSF Category: B

SSF ID: B 18





**Iswareya  
Lakshimi V**

Tamil Nadu

SSF Category: B

SSF ID: B/60



Biomedical cotton waste was used for one of my projects wherein it was sterilized by various physical and chemical methods. I also conducted 3 different awareness programs for school students, college students and healthcare workers about biomedical waste management and innovative waste management methods.



Usage of waste material like cardboard, wood, cloth pieces, paper, etc was converted into useful and decorative home items.



**Isha Khanna**

Uttar Pradesh

SSF Category: B

SSF ID: B/142



**Virat Khand Residents Welfare Society**

I have collected solid waste and converted it into vermicompost. This has helped the locals in my neighbourhood in developing beautiful, self-sustainable terrace gardens. I organized 3 seminars and training sessions to educate people about using Vermi/Jaivik compost along with its benefits for rooftop gardening using Jaivik fertilizer



Uttar Pradesh

SSF Category: C

SSF ID: C/29



Solid wastes were reduced from industries by inclusive approaches like clean-up drives.



**Jag Mohan**

Jammu and  
Kashmir

SSF Category: B

SSF ID: B/116





## Jagdeep Singh

Uttar Pradesh

SSF Category: B

SSF ID: B/121



The aim was to start a crop residue waste management plant at MP with one already existing at Farrukhabad, Uttar Pradesh and a briquetting plant at Vidisha, MP. I even wrote a book on waste management, published on Kindle. Awareness campaigns among the society through face-to-face meetings, social media Channels, and helping set the right examples in our society were done.



A stagnant water body was selected and tested for the presence of potential microorganisms like Anabaena which help in solubilizing zinc present in kitchen waste to promote nitrogen fixation. Finally, after several months, when decomposition process was completed, this nutrient- rich soil was distributed locally.



## Khushboo Fulara

Delhi

SSF Category: B

SSF ID: B/127



## Koushik Bose

Gujarat

SSF Category: B

SSF ID: B/143



After identifying a locally grown weed of zero economic value growing extensively and covering around 60 per cent of agricultural land, we found a way to convert this waste weed into a product that protects crops from pests, insects and fungal infections and increase crop productivity



Published two research articles on circular supply chain, circular economy, sustainability.



## Madhukar Chhimwal

Delhi

SSF Category: B

SSF ID: B/6





Monika Sindhu

Haryana

SSF Category: B

SSF ID: B/106



I had successfully synthesized eco-friendly nanocomposites where the main objective was to utilize biomass (waste) into carbon to make electrodes which are cost-effective and help in achieving the conversion from waste to wealth. The second objective was to produce energy from wastewater enabling the green approach to convert waste to energy.



My main purpose to become a Swachhta Saathi is to take an initiative to make the ones around me more aware through awareness programmes.



Monjit Hazarika

Assam

SSF Category: B

SSF ID: B/193



Nirigi Linggi

Arunachal Pradesh

SSF Category: B

SSF ID: B/08



Annual collection and quantification of leaf litter was done, studying the bioreactors along with various admixtures that existed in the litter. Based on the previous study, another set of vermicomposting units in earthen pots were studied resulting in the pots having a substantial water loss issue, although promoting decomposition rather effectively.



I did kitchen composting, kitchen gardening, vegetables composting with aeration in my house.



Tushar Hajare

Maharashtra

SSF Category: C

SSF ID: C/38







Ogirala Gopi  
krishna

Odhisia

SSF Category: B

SSF ID: B/43



After collecting the plant waste, grading the waste materials and sun drying it to get the dried plant waste, commercial or farm-made feed was mixed at different proportions to feed the fish. The proximate composition of plant-based waste products and growth of adult fish from every month were recorded.



I developed a feasible concept on how to work for product development, finalising the blueprint for dustbins, like designing it and creating ways to make it function.

Om Ranjan



Bihar

SSF Category: B

SSF ID: B/144



Panchal Nikhilkumar  
Rajnikantbhai

Gujarat

SSF Category: B

SSF ID: B/178



I started experimental work by preparing samples from the COVID-19 PPE kit and noticed we could offer a solution for converting PPE waste into valuable resources by finding an optimum pyrolysis temperature for different polymers.



I have allocated different places in the college for segregated waste such as paper waste, leaf waste, kitchen waste and e-waste, thereafter, converting this into brown and white paper that was supplied back to the administrative team and recycled as carry bags and file covers among other things.

Pooja Sharma



Haryana

SSF Category: B

SSF ID: B/119







Prakruthi M Hegde

Karnataka

SSF Category: B

SSF ID: B/182

I recycled significant amounts of fruit peel waste, water and plastic bottles for the preparation of MBCP. I even conducted awareness sessions for students and general public.



I used chitosan powder and converted it into spherical beads to remove dyes and heavy metals such as Cd, Pb, Cu from industrial wastewater

Preeti Pal

Maharashtra

SSF Category: B

SSF ID: B-28



Priyanshu Dwivedi

Uttar Pradesh

SSF Category: B

SSF ID: B/177



Within this period, I have conducted many events not only in our university campus but in different villages and cities also. I have collaborated with many NGOS and other student organisation and conducted many awareness camps, rallies and cleanliness drives.



I organised plantation cleanliness drives, save the river awareness drives and importance of segregation of waste sessions in my community and college.

Rahul pal

Delhi

SSF Category: B

SSF ID: B/192





Ramdyal Singh

Punjab

SSF Category: B

SSF ID: B/72



I worked to inspire farmers in my neighbourhood to not burn paddy straw by collecting it in one factory and selling it for converting into cardboard for a small fee. This has led to lesser burning of paddy straw, adding to lesser pollution and increased soil fertility in my area.



I commercially landed and pre-processed deep-sea shrimp species for export by conducting a deep-sea shrimp shell proximate composition and chitin content analysis.

Rasweep Ali

Kerala

SSF Category: B

SSF ID: B/50



Rayees Zahoor Shah

Jammu and Kashmir

SSF Category: B

SSF ID: B/170



I worked with my society team to conduct various public awareness programs and door to door drives on waste segregation at different levels (village, college and school) within my neighbouring communities. I organised communal visits to the municipal corporation in my area to increase awareness in the field of waste management.



I am working to educate people through cleanliness drives and raise awareness on the management of waste materials. I demonstrated different methods to reduce the uses of plastic material, create bio enzyme from orange peels, and create dishwash from soapnuts and lemon peel to push community members to use sustainable products.

Rituraj Ghosh

Jharkhand

SSF Category: B

SSF ID: B/27





Rohit Anavalmath



Karnataka

SSF Category: B

SSF ID: B 158

I cultivated and reared black soldier flies' larvae which I later fed to my poultry birds as a protein rich feed as a substitute for soya.



A sustainable in-house technology was developed to convert metal waste into powder feedstock, that can be used in many applications ranging from reinforcement in pavements to building 3D printed metallic parts. To raise awareness on the use of innovative recycled material in various communities, I worked with volunteers from an international NGO.

Sahil Dhiman



Punjab

SSF Category: B

SSF ID: B/65



Sahima Tabasum



Jammu and Kashmir

SSF Category: B

SSF ID: B/150

I have done synthesis of Graphitic Carbon Nitride Nanocomposite material for degradation of pollutants from wastewater. Also, characterization and fabrication, immobilized with other catalyst material to improve the photo-metal oxide dispersion and enhance the bilateral process of removal of pollutants from wastewater done.



I segregated my household waste into three components - organic waste, plastic waste and inorganic waste. The organic waste was converted into pure manure which is highly nutritious for soil. The plastic waste was accumulated in a compressed container and cemented into a rigid pillar. I pitched my pilot plant idea to investors

Santanaba Krishna  
Hazarika



Assam

SSF Category: B

SSF ID: B/35





Satheeskumar B



Tamil Nadu

SSF Category: B

SSF ID: B/039

I have developed an indigenous prototype using a steel tub, mounted turbine and circuit for electricity to use dried organic waste as a fuel agent.



Requesting a discussion with professors, students and other faculty on the various topics under waste, and waste management with children encouraged, and supported students to survey, collect data and analyse the impact of individual-level on waste generation Encouraged and supported students to upcycle different Solid Waste in several ways.

Shalini Soni



Chhattisgarh

SSF Category: B

SSF ID: B-110



Shruti Mittal



Uttar Pradesh

SSF Category: B

SSF ID: B/29

I used various household waste such as coconut shells, cold drink bottles, and surf excel bottles to create pots containing various types of plants. This allowed me to create a beautiful garden and inspire my neighbours.



I collected and shredded leaf litter waste on my college campus. The shredded leaf was then composted in the composting bin using microbial inoculum for about 3 weeks. I tested and analysed the mature compost for its quality.

Sophayo Mahongnao



Delhi

SSF Category: B

SSF ID: B/93







Soubam Indrakumar  
Singh

Punjab

SSF Category: B

SSF ID: B/58



I focused my research on vermicomposting and performed tests such as physicochemical analysis, heavy metals analysis, SEM analysis, genotoxicity test and seed germination. I presented this work at national and international conference to educate more students, ngo's and industrial units. This has allowed me to publish my work at a local newspaper in Manipur.



I have led awareness programs through making waste to wealth models and submitting presentation slides on waste management at various programs held within my community.

Sukanya Borkakoti

Assam

SSF Category: B

SSF ID: B/020



Swati Chaturvedi

Delhi

SSF Category: B

SSF ID: B/114



A review was done about the invasive and consumable plants that grow in India. Two plants were selected for the study obtaining methanolic extract and aqueous extract of *Amaranthus viridis* leaves, a few of the potential extracts from the previous experiments were found.



I developed and designed a reactor system to produce fuel range liquid hydrocarbons using a two-step approach by thermo-catalytic cracking of plastic waste.

Uma Dwivedi

Delhi

SSF Category: B

SSF ID: B/5





Vaibhav Fulara

Delhi

SSF Category: B

SSF ID: B/80



I focused on creating awareness on the ill-effects of wastewater to the general public. I conducted several drives and assisted in construction of new road to stop water stagnation in my area.



I focused on creating awareness on wastewater treatment. I designed a filter with basic raw materials to install in my colony and get real time feedback from users. This allowed me to study its maximum shelf life and perform a cost benefit analysis of the same. Basis my research, I'm using this filter to treat wastewater

Vardhaman Lunawat

Maharashtra

SSF Category: B

SSF ID: B/14



Vengadeshwaran  
Sampathkumar

Tamil Nadu

SSF Category: B

SSF ID: B/123



I built a pyrolysis chamber using old diesel barrel and by welding it with iron rods. It allowed me to extract 15 litres of fuel which I sold to agriculture labours and villagers for at a cheap price



A total of 6 collection points has been made for solid waste collections. 340 students are sensitised within our communities on awareness of waste management. More than 4000 kg of plastic has been converted into fuel from the machinery. The fuel received is then supplied to the local market at a cost. Additionally, we have collaborated with Nagar Parishad and other local bodies.

Vineet Kumar

Bihar

SSF Category: B

SSF ID: B/89





Aditya Madan

Punjab

SSF Category: C

SSF ID: C/9



I increased source segregation percentage to 80% and the number of wards being covered under door-to-door waste collection to 23. This resulted in the GVPs in the city to be removed.



In one year, I have done home composting, source segregation of waste, banned the use of plastic and created awareness on the ban on open defecation.



Bandari Bhanumathi

Telangana

SSF Category: C

SSF ID: C/23



Binay Krishna Maity

West Bengal

SSF Category: C

SSF ID: C/44



I have collected used plastic from our nearby houses and villages to make handicraft items like toys, bags and nets. This has resulted in people not throwing plastic in garbage within my community.



I have initiated the effort of door-to-door collection of waste management within my community. I even executed a 'Buy back' scheme in my city to control the problem of plastic waste.



C SREE KARTHICK

Andaman and  
Nicobar Islands

SSF Category: C

SSF ID: C/7





Chityala  
Adilakshmi

Telangana

SSF Category: C

SSF ID: C/10



I started composting and within few months had my own place of compost beds. After my success, I even transformed a garden into a compost unit.



Dr Lata Ghanshamnani

I have placed green pharmacy collections bins at 22 Sites (residential and drop off) which collected 700 kgs of pharmaceutical waste. Around 10,000+ citizens have been sensitised on Biomedical waste management.

Maharashtra

SSF Category: C

SSF ID: C/12



Dr. Atul Choudhary

Uttar Pradesh

SSF Category: C

SSF ID: C/60



I adopted a park near my premises and started cleaning along with plantation. I have encouraged my society members to recycle household waste and plant trees on special occasions. Once a fortnight, I visit the Yamuna River and clean the Yamuna ghats to raise awareness. My extensive work within my community helps me in raising awareness on waste management.



Dr. Balmukund Damodardas Paliwal

I have taken many seminars at different schools and colleges to share ideas on innovative products that can be made from plastic waste. As a result, I have also installed several benches and tables made from plastic at public places.

Maharashtra

SSF Category: C

SSF ID: C/50







Dr. Kaushik Devaraju

Karnataka

SSF Category: C

SSF ID: C/76



I have formed have a 'KRPA MEDSBIN' Fellowship to scale my activity in raising awareness on medical waste. We have installed MEDSBIN in different colleges and sensitized students about the adverse event of expired and unused medicine.



I have used lab-based research techniques for addressing organic waste degradation. As a result, plants were cultivated using the by-product and altering the measured growth parameters. I have trained many students, volunteers and self-help groups along the process.

Dr. Nitin Wahi

Uttar Pradesh

SSF Category: C

SSF ID: C/55



Dr. Ruby Makhija

Delhi

SSF Category: C

SSF ID: C/25



I have started a project 'Vikalp - Borrow a Bag' with the support of the Municipal Corporation of Delhi. Around 160 Vikalp stalls are running successfully in over 100 Delhi markets to reduce use of SUP bags. I have conducted meetings to raise awareness on source segregation, composting and reducing SUP with over 2000 RWAs, MTAs, Educational Institutions, Religious Institutions, Malls, Clusters, Hotels, Dhaba's, Restaurants, Markets, Mandis. Through this initiative, over a lakh of individuals have been sensitised.



I have succeeded in changing the tradition of presenting bouquet in programmes by replacing it with saplings. Realising my true potential in creating an impact, I started two other initiatives, producing bio-enzyme from temple waste flowers, and creating organic compost from domestic waste.

Dr. Yogesh  
Chandra Dixit

Uttar Pradesh

SSF Category: C

SSF ID: C/74





Indra Chellaiah

Tamil Nadu

SSF Category: C

SSF ID: C/62



I have raised awareness on waste management for students by conducting fun and innovative street plays within my community.



I along my Swachhta Saarthi peers started a pilot project named 'Mission Waste to Wealth', inspired from SSF and Invest India. In collaboration with the Municipal Corporation of Chandigarh, Chandigarh Pollution Control Committee and the Department of Environment, we selected around 50 institutes across Chandigarh, including schools and colleges to conduct many webinars, awareness sessions and workshops on waste management. Through this initiative, more than 35000 people were sensitised.



Kirti Bhardwaj

Punjab

SSF Category: C

SSF ID: C/30



Lomas Dhungel

Sikkim

SSF Category: C

SSF ID: C/54



I have used 65,270 pages for upcycling into 652 notebooks at a nominal fee. 3097 plastic pieces have been upcycled into book covers. I have helped more than 100 students in upcycling the plastic pieces into approximately 300 book covers.



Mohammad dudekula Gousia

I have conducted awareness drives within my community on source segregation by segregating waste into wet, dry and hazardous waste.



Andhra Pradesh

SSF Category: C

SSF ID: C /2





**Nagendra  
Agnihotri**

Uttar Pradesh

SSF Category: C

SSF ID: C/69



I have done several activities like identification of volunteers, capacity building of volunteers, town level events, awareness campaigns, school level events, summer camps for recycling of waste products, importance of waste management, and conversion of waste to wealth.



I have conducted virtual sessions on how to make Dhoop cones for various groups of women. I have even collaborated with other Swachhta Saarthi fellows in running biodiversity awareness campaigns and talk shows among other things within our communities to raise awareness on waste management

**Padmini Rangarajan**

Telangana

SSF Category: C

SSF ID: C/22



**Pandiarjan Mo**

Tamil Nadu

SSF Category: C

SSF ID: C/80



I made coconut oil from waste coconuts that were being thrown at temples. Given that coconut oils is pure, it can be commercially sold for generating income.



I organised many awareness sessions both online and offline on effective waste management. I have also developed a Pancha Kavya Organic Diya making machine and a hardware prototype model of "Smart Power Bank" from my e-waste collections.

**Priya Vinothkumar**

Puducherry

SSF Category: C

SSF ID: C/59





## Rafikh Shaikh

Maharashtra

SSF Category: C

SSF ID: C/77



I have designed and developed a simple method to collect, detect and measure microplastic in household dust. I further collaborated with students and teachers in designing and conducting experiments to learn about microplastic in homes.



Through this fellowship, my efforts have been strengthened in raising awareness in waste collection and management. I have been able to make significant progress on solid waste collection, sorting and management to ensure all-round participation.

## Rekha Kumar

Telangana

SSF Category: C

SSF ID: C/41



## Rohit Kumar

Chandigarh

SSF Category: C

SSF ID: C/67



I along my Swachhta Saathi peers started a pilot project named 'Mission Waste to Wealth', inspired from SSF and Invest India. In collaboration with the Municipal Corporation of Chandigarh, Chandigarh Pollution Control Committee and the Department of Environment, we selected around 50 institutes across Chandigarh, including schools and colleges to conduct many webinars, awareness sessions and workshops on waste management. Through this initiative, more than 35000 people were sensitised.



I collected wastepaper by conducting door-to-door campaigns within my community and converting them into notebooks.

## Shubh Gupta

Delhi

SSF Category: C

SSF ID: C/72







## Social Substance

Chandigarh

SSF Category: C

SSF ID: C/68

I created several audio videos and disseminated it among the public to raise awareness on waste management. I conducted online and offline awareness sessions. As a result of my efforts, a Bioreactor at Phase V, Mohali. was successfully installed.



I have educated my community, students, and dhwakra group to reuse kitchen waste by converting them into manure. I even cultivated mushroom and few vegetables with the group. This process is being scaled up to see more results and engage more participation. provide research-based data on it.

## STV Raghavamma

Andhra Pradesh

SSF Category: C

SSF ID: C/21



## Sushmita Sanyal

Bihar

SSF Category: C

SSF ID: C/42

My initiatives have helped me empower women in villages and female students by organising awareness camps on proper disposal of used sanitary napkins. I even collected domestic waste from my neighbours such as old paint buckets, old worn-out garden pipes, old used bike batteries, old earthen pots and pitchers to convert into a Matka Cooler for sale at a nominal fee.





## V V Agravat

Gujarat

SSF Category: C

SSF ID: C/71



I converted kitchen waste into organic manure by digging a compost pit in our community and throwing the vegetable waste, fruit waste, flower, other biodegradable plant waste in it. This method is used to segregate the bio waste from hazardous waste or non-recyclable waste.



## Veerabhadra Swamy

I created action plans to conduct door to door awareness programmes in my community. I even conducted survey meetings and received support from the Saragur Town Panchayat. This allowed me to muster the courage to form a SHG that conducted weekly SHG meetings of persons with disabilities for monitoring of household waste segregation. I even conducted meetings with various stakeholders of Saragur town and members of Traders Awareness through community radio station and other activities.

Karnataka

SSF Category: C

SSF ID: C/56



## Velentina Brahma



Delhi

SSF Category: C

SSF ID: C/13

I inspired women to openly discuss menstrual hygiene issues and to opt for biodegradable sanitary products within my community. As a result, it has provided means of livelihood for the young volunteers benefiting from this campaign.





Thanushree

Karnataka

SSF Category: A

SSF ID: A/091



I have used many ways through which domestic waste can be converted into wealth in our home and surroundings such as converting kitchen waste into manure and making useful and decorative items out of waste.



Vaibhav C D



I have helped in keeping the surroundings clean and collected paper waste for recycling. This has inspired my peers and community members to do the same.

Karnataka

SSF Category: A

SSF ID: A/121



Nishith P



Karnataka

SSF Category: A

SSF ID: A/121



I developed an Android App (prototype) and web application which will soon be uploaded to Google Play Store to lure a large audience and educate them about Plastic Waste Recycling based on the 7 Resin codes or Grades. I also created a google form to accept community-based data uploads in order to widen and enhance the current database of 3000+ images to make the model more accurate and of wider use.





## Office of the Principal Scientific Adviser to the Government of India



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Contact us at

 First Floor, Vigyan Bhawan, Maulana Azad Road, New Delhi-110011  
 [contact.wastetowealth@investindia.org.in](mailto:contact.wastetowealth@investindia.org.in)  
 [www.wastetowealth.gov.in](http://www.wastetowealth.gov.in)