

Saahas

ANNUAL REPORT

FINANCIAL YEAR: 2016-2017



TABLE OF CONTENTS

Contents

Introduction	1
Overview and Milestones	2
Projects Executed	4
bE - Responsible, Bengaluru	5
Parivartana Hejje, Hubballi	7
Alag Karo, Gurugram	9
Beyond the Broom, Ballari	11
Kasa Rasa, Bengaluru	13
Reverse Logistics Network for Used Tetra Pak Cartons	15
Responsible Waste Management – Multi-layer Plastic Packaging	16
'Say No To Plastics' Campaign	18
Partners in 2016-17	19
Balance Sheet 2016-2017	20
Financial Statements	21
Human Resources	22
Board Members	23
Contact Information	24
Company Information	24

INTRODUCTION

Introduction

ABOUT US

Saahas, with its headquarters at Bengaluru, has been actively involved in Solid Waste Management for the past 16 years. Our commitment towards building Zero Waste Communities is unflinching. We are devoted to finding and implementing new solutions to the ever-growing problems related to the management of Municipal Solid Waste.

VISION

To be a leading source of innovative solutions and strong advocacy for a sustainable ecosystem of solid waste management engaging government, commercial and residential stakeholders.

MISSION

To be the leader in establishing best practices in solid waste management, which demonstrate sustainable solutions and increase awareness and compliance in the community.

OUR OBJECTIVES

The key objectives of Saahas are:

- Maximize resource recovery through environmentally and economically sustainable programs
- Sensitize communities and bringing about behavioral change
- Implement strong monitoring and supervision processes for accurate impact measurement.
- Provide dignified job opportunities for people at the bottom of the pyramid

OVERVIEW AND MILESTONES

Overview and Milestones

In the year 2015-16, we saw the stabilization of our Rural program and the starting of some exciting and path breaking projects at different locations. We were able to launch multiple programs, each addressing different problem areas in the field of municipal solid waste management.

Our program verticals were clearly defined this year and we are now able to categorize our projects into distinct categories. The four verticals defined are:

- Sustainable Waste Management Programs
- Sensitization and Behavioural Change
- Consultancy and Research
- Building Reverse Logistics Networks



Year 2016-17 saw us adding more villages to our Beyond the Broom rural waste management program and the program gained visibility and wider acceptance in the entire region.

The new initiative undertaken in the year we the initiation of an e-waste collection and awareness program where an electric vehicle was deployed to facilitate collection along with setting up of public collection points. This helped address the need for an easily

OVERVIEW AND MILESTONES

accessible and reliable collection system for household e-waste. Another program with an entirely different focus is the Alag Karo program initiated at Gurugram. The focus of this program is on implementation of Source Segregation and imparting training to housekeeping and collection staff. This program has a pan Gurugram coverage and will help us establish a presence in NCR.

An entrepreneur model of running a Dry Waste Collection Center was tried out in the Hubballi project, also initiated this year. Source segregation is virtually non-existent in Hubballi and the Hubli-Dharwad Municipal Corporation is trying to initiate segregation of waste and has procured some waste collection vehicles that have two compartments to transport segregated waste. Through our program, we try to spread awareness about waste, encourage people to handover their waste to the HDMC collection vehicles and ensure that the dry waste is brought to the DWCC set up by HDMC. The DWCC is run by an entrepreneur.

We also carried out a pilot to demonstrate a model for low-grade plastic waste recycling. In the current scenario, the high value dry waste like PET bottles, paper, cardboard, metal cans etc. are picked up by the waste pickers and sold to scrap dealers and through them sent to recyclers. However the low grade and non-recyclable waste like multi-layer packaging, textiles, bags etc. is not picked up by and is usually dumped or burnt. In the pilot project, we demonstrated how this low grade non-recyclable waste can be sent to cement factories for co-processing and the steps and costs involved were documented.

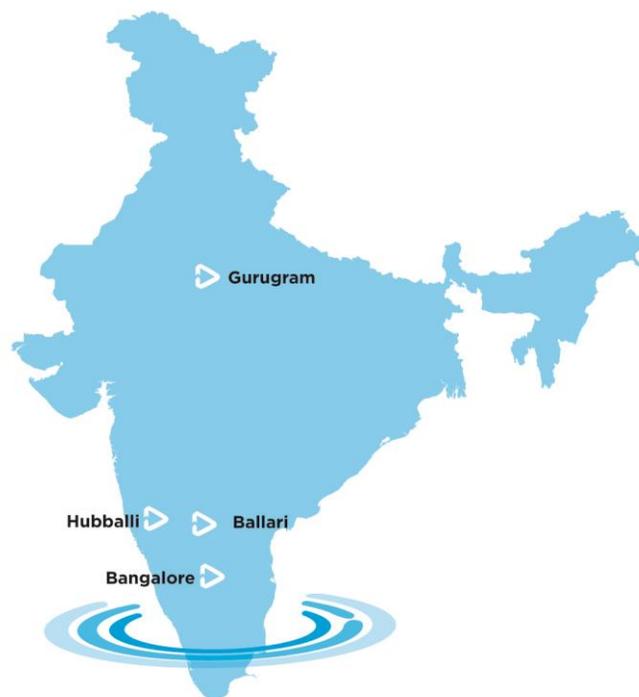
We plan to stabilize these programs in the coming year and continue to come up with innovative solutions around waste.

PROJECTS EXECUTED

Projects Executed

Some of our key projects in the year 2016-17 were:

- 1) bE - Responsible, Bengaluru.
- 2) Parivartana Hejje, Hubballi.
- 3) Alag Karo, Gurugram.
- 4) Beyond the broom, Ballari.
- 5) Kasa Rasa 3, Community Waste Management Center in Whitefield, Bengaluru.
- 6) Reverse Logistics Network for Tetra Pak
- 7) Responsible Waste Management Solutions – Multi-layer Plastic Packaging with HUL
- 8) 'Say No To Plastics' campaign with ExcideLife



BE - RESPONSIBLE, BENGALURU

bE - Responsible, Bengaluru

Started in November 2016

An initiative for environmentally responsible collection and recycling of e-waste in Bengaluru

E-waste is one of the fastest growing waste streams and India is the 5th largest generator of e-waste. Bengaluru is the 3rd largest generator of e-waste in the country and is producing close to 100,000 tons of e-waste annually which is likely to grow by 500% by 2020. Presently, more than 90% of e-waste in India ends up in the informal sector for recycling with serious repercussions on human health and the environment. The informal sector works on small scale with minimal facilities and equipment to take care of the hazardous elements like lead, mercury, cadmium etc., present in the e-waste. E-waste also has some REE (rare earth elements) that need to be extracted and recycled efficiently which can only be done in well-equipped facilities.



Saahas and **Environmental Synergies in Development (ENSYDE)** together initiated the **bE-Responsible** program to create awareness and facilitate collection of household e-waste in Bangalore. The e-waste collected through this program is being routed to authorized e-waste recyclers. The program is being supported by VMWare.

The program in its first phase was implemented in 10 wards in South Bangalore, creating awareness about the problems due to improper disposal of e-waste and facilitating proper disposal. The awareness programs are conducted in



BE - RESPONSIBLE, BENGALURU

Resident Welfare Associations and Institutions (schools, colleges, hospitals, offices, retail, etc.) through workshops, campaigns, emails, and social media. The awareness drive is supported by the on-ground collection system which includes door-to-door collection drives, drop-off boxes at locations accessible by general public and a mobile collection van for scheduled collection from different locations in South Bangalore.



As part of the program, e-waste drop-off boxes have been placed in nine Bangalore One centres in south Bangalore which are secure, easily accessible to the public and are open on all seven days of the week. Based on the good response we got from public, the Chief Post Master General, Karnataka Circle approached us to add Post Offices also as locations of the public drop-off boxes. Subsequently, two drop boxes have also been placed in post offices in J P Nagar 6th Phase and Jayanagar 3rd Block.



The collection campaign which started in January 2017 has already collected over **1.5 tons** of e-waste till March 2017 and has reached out to about **4000** individuals through our campaigns and outreach programmes. The success of this program will help reduce the damage being caused to the environment by non-scientific methods used in dismantling and recycling of e-waste by the informal sector. We are looking forward to expand the reach of the program

to other zones of Bangalore with the support of other corporate companies, RWAs, institutions and the general public.

PARIVARTANA HEJJE, HUBBALLI

Parivartana Hejje, Hubballi

Started in November 2016

Sustainable Waste Management program in Hubballi

Parivarthana Hejje, is a sustainable waste management program run by Saahas based on source segregation and decentralized waste management system. Sahaas has already established 3 Kasa Rasa units in Bangalore, each of them managing between 1 to 2.5 Tons per day. The Wet Waste is composted and Dry is sorted in different categories and sent for recycling. Almost 90% of waste in these units is recycled and only 10% is sent to landfills. The project in Hubballi is on similar lines, but is focused on dry waste. Parivarthana Hejje is being supported by **Deshpande Foundation**.

The project is based on the following considerations:

- Program is closely assigned with the SWM rules 2016.
- Intervention should be long lasting and having a clear impact.
- Simple and low risk program, which can be adopted and scaled up by the government.
- Program executed by a local team closely monitored by Saahas.
- Strong citizen engagement is a part of Sustainable Waste Management, with citizens segregating their waste, at source. So it is important to involve large number of citizens.



The program involves providing awareness to households about segregation of waste at source and the setting up of a Dry Waste Collection Center to handle the dry waste collected from the households.

Based on the above lines, a “**Dry Waste Collection Centre**” (DWCC) was been set up and is being run by an entrepreneur. The center



was built with the support of the Hubballi Dharwad Municipal Corporation. The DWCC takes

PARIVARTANA HEJJE, HUBBALLI

in Dry Waste from over 500 households where the entrepreneur does basic sorting and sells the recoverable.

The remaining non-recyclables is being sent to Cement Kilns as alternate fuel.



Awareness and training campaigns conducted by Saahas

Saahas led an awareness initiative on the ground to engage with nearby citizen and PKs working in the area. Saahas also conducted a training program to the local entrepreneur in running the DWCC unit. He is also provided with all the basic tools for proper data and accounts management. Households are encouraged to handover their segregated waste to the HDMC collection vehicles, which have different compartments for the two types of waste. The dry waste is then brought to the DWCC for sorting and sending to the right destination. This ensures that the dumping of the dry waste is reduced to a bare minimum.



ALAG KARO, GURUGRAM

Alag Karo, Gurugram

Started in January 2017

Source segregation awareness and implementation program in Gurugram

Gurugram generates more than 1000 Tons per day of municipal solid waste; most of which is at present is being dumped in landfills outside the city. If segregated at source, 90% of the waste can be converted into resource. **Alag Karo** is one more zero waste neighborhood program run by Saahas which promotes implementation of source segregation leading to improved resource recovery.

Saahas, in association with **GIZ**, **Coca-Cola India Pvt Ltd** and **Tetra Pak India** has launched this three year program to implement “Source Segregation” in apartments, Offices, Tech parks, Malls and Educational Institutions in Gurugram. The launch of the project was held on 17th March 2017 at auditorium of Govt. Girls College, Sector 14 of Gurugram.

During the official launch, a kiosk was set up at the venue to showcase the key components of the program. The stall was manned by the Saahas Gurugram team. The kiosk had a 3D model of the problems caused by mixed waste collection and the benefits achievable by introducing source segregation. The stall also displayed recycled products made from used Tetra



Pak Cartons and PET bottles.



The source segregation program aims to spread awareness about source segregation and implement 3-way segregation of Municipal Solid Waste in apartments, schools and offices, as mandated by the Solid Waste Management Rules 2016. Awareness is being created through public events, media campaigns, workshops for all stakeholders involved.

ALAG KARO, GURUGRAM



Pictures of awareness campaign with RWAs, malls, residents, students and waste workers



The program aims to implement source segregation in 9000 households of 60 RWAs. In addition, 50 schools and 50 commercial establishments such as offices and malls are involved in implementing source segregation. Also, working with the waste workers to train them in handling segregated waste and increasing their revenue potential from, the waste, is a major part of the program.

The Alag Karo project will be implemented across a span of next three years.

Alag Karo flyer used during campaign >>



BEYOND THE BROOM, BALLARI

Beyond the Broom, Ballari

Continuing from last financial year

The Beyond the Broom, Green Waste Management program was started in the year 2015 after an extensive audit was conducted in the villages around the JSW plant in Torangallu.

Based on the findings of the audit, Saahas proposed a three-year program aimed at generating awareness about waste segregation at source, door-to-door collection of dry waste and transportation of dry waste to authorized recycler. This program was to cover 12 villages in a phased manner.



In the year 2015-16, 6 villages were covered under the program where weekly dry waste collection was taking place from households and shops. Temporary storage facility was provided by the gram panchayats in two of the villages. The program was launched in three villages, Bhuwanahalli, Taranagara and Gadiganuru while three more villages

Bannihatti, Gangalapura and Nagalapura were added later.

In the year 2016-17, three bigger villages with a semi-urban demographic profile were brought under the program implementation area. These were Vaddu, Torangallu village and Torangallu RS. Extensive awareness campaigns were launched in these three villages and

support from the Gram Panchayat members was also obtained. Sessions were conducted in all the schools in these villages. Blue dry waste collection bags were distributed to all the households and shops. In Torangallu RS, which is the Railway Station area of Tornagallu, only shops were



covered to begin with. Households would be added in the next financial year. The program

BEYOND THE BROOM, BALLARI

covered 11,000 households and 1050 shops where weekly collection of dry waste was carried out.

By the end of financial year 2016-17, a total of **95Tons** of dry waste was collected under this program, thereby preventing it from being burnt or dumped in the open. Out of this **35.3Tons** of waste was sent to cement kilns in Wadi for coprocessing. **36** awareness sessions were conducted by the awareness team, apart from



regular door-to-door awareness campaigns in all the villages. This program has seen a lot of support from the residents of the villages who are very happy to see reduced littering and less blocking of the drains.

In the next year, Kurekappa and Basapura villages will be added along with the households of Torangallu RS.



KASA RASA, BENGALURU

Kasa Rasa, Bengaluru

Kasa Rasa 3: Operational from June 2016

“When waste is managed at source it becomes a resource”

This fact forms the core of a decentralized waste management system. This is the heart of our zero waste neighborhood programs. Decentralized waste management system is the heart of our zero waste neighborhood programs. Managing waste at source involves setting up of community waste management facility which has infrastructure to manage segregated wet and dry waste from the nearby households.

Having already set up two community waste management centers in Bengaluru, with the support of **Capgemini** we completed the setting up of our third decentralized waste management center in Bangalore in this year. **Kasa Rasa-3** has a processing capacity of 2.5T waste per day and will service 4000 households in Whitefield.

The two program objectives are:

- To create resources from waste rather than dispose it in a landfill.
- To demonstrate efficient neighborhood waste management.



This is the first such centre in Whitefield and the third in the city of Bangalore. Launched as a part of Capgemini’s CSR efforts towards the Environment, the primary aim of this waste management plant is to demonstrate the concepts of *Decentralised Waste Management* driven by *Segregation at Source*. The center is located at Doddenekundi Ward 84 in Whitefield.



The centre was inaugurated in June 2016 and has been operational since then. Waste from the nearby communities is brought to this facility where the wet

KASA RASA, BENGALURU

waste is composted and the dry waste is further sorted into different recyclable categories. The non-recyclables are stored and sent to the ACC cement factory at Wadi.



The data about the quantity and type of waste received is updated daily by the unit supervisor using a mobile app. The data about the different categories of waste and their destinations is also recorded.

The center also serves the purpose of giving the communities of how waste can be efficiently managed and the implications of not segregating the waste at source on the staff working on waste. The center has seen many visits to the site by employees of corporates, school students and members of ULBs. These visits help in sensitizing people about waste and showcasing how decentralized systems can help in solving the mounting problem of waste being faced by every city today.

REVERSE LOGISTICS NETWORK FOR USED TETRA PAK CARTONS

Reverse Logistics Network for Used Tetra Pak Cartons

Continuing from last financial year

Over the last 5 years, the support from Tetra Pak India has helped us achieve significant results both in terms of awareness as well as increase in collection of post-consumer Tetra Pak cartons and filler waste from different areas of Bangalore. Currently, from Bangalore, about 200T per month is being sent for recycling. In the last two years, Tetra Pak partnered with Saahas to expand the program to Hyderabad and Mysore-Channapatna region. The Chennai program that was launched in July 2013 was further supported. A detailed study in collaboration with IIMB was also undertaken to assess and document the socio-economic impact of the program in Bangalore on Waste Pickers.

In the year 2016, the interventions were of two types:

- Holding awareness sessions for waste workers
- Building the reverse network to enhance the collection



Multiple awareness sessions were held for waste workers in Kengeri, Hyderabad and Chennai. UTPC collection bags were distributed to the retail establishments and waste workers for storing of Tetra Pak cartons. Eighty retail outlets have been identified in Mysore and connected to the local waste workers. The collection network in Mysore – Channapatna belt was strengthened by adding more retail outlets and waste collectors. In Hyderabad, we have identified scrap dealers who deal in large volumes of paper and dry waste. These have been connected to waste worker colonies which get waste from the commercial establishments and residential layouts in Hitech City. In Chennai, we have connected with a couple of dealers in paper who want to get into recycling of TPC to make paper.

RESPONSIBLE WASTE MANAGEMENT – MULTI-LAYER PLASTIC PACKAGING

Responsible Waste Management – Multi-layer Plastic Packaging

Saahas, with support of HUL, conducted a pilot to demonstrate the collection and recycling of plastic waste, primarily the packaging waste made up of multi-layer plastic packaging. The pilot was carried out at two locations, Bangalore and Delhi-NCR.

Multilayer plastic packaging, by volume, accounts for one of the biggest streams of waste generated from household. Increasing larger quantities of multi-layer plastic is being used for packaging which largely gets dumped or burnt. Dumping causes many serious issues like clogging of drains and other water bodies, harming animals. When dumped in landfills, as the material does not degrade it results in occupying large volume; when dumped along with organic waste it creates in poisonous leachate, polluting water table and soil.

Burning is also harmful especially if any halogenated plastic is present it could then release harmful gases like dioxins. Presence of plastics in the stream for incineration pose a major problem because often the incinerators shut down due to clogging and require a lot of maintenance. So, incineration of plastics is not a good proposition.

Owing to the lack of recycling avenues and hence the poor value attached to this material, it largely ends up in landfills even at places where there is good level of “*segregation at source*”.

Multilayer plastic packaging is used by most FMCG and Food companies across the globe to package their products. They are now expected to take responsibility for their, pre and post-consumer packaging under the concept of **Extend Producer Responsibility**.

In 2016 the Indian Ministry of Environment and Forest also introduced legislation in the form of the **Plastic Waste Management and Handling Rules** which further endorses the concept in India.

This pilot project was aimed at understanding the option of sending this low or no-value waste to cement kilns as alternate fuel and feeding it to Waste to Energy RDF plant.

During the pilot, 3 loads of plastic waste, mostly MLP, totaling 10.64Tons was sent to a cement factory in Wadi. IL&FS has a “RDF” based facility that generates power from plastic waste or RDF in Delhi. 3 loads totaling 10.1Tons was sent to this plant from Gurgaon under this project. The costs involved in storing, loading and transportation of the waste were recorded at both the locations. The waste was picked up from large aggregators of waste.

RESPONSIBLE WASTE MANAGEMENT – MULTI-LAYER PLASTIC PACKAGING

The following conclusions emerged from the pilot:

Using the low or no value plastic waste as alternate fuel in cement kilns or RDF facilities seems to be making good progress both in terms of consistently taking in larger volume and more companies showing interest. It is also flexible to take in a different mix of plastic waste. However this process requires support in terms of better collection and transportation. There is need for:

- Aggregators so that larger volume is collected to ensure dedicated handling infrastructure which would bring down the cost of pre-processing.
- Ensuring the category becomes economically viable for different players, starting from waste pickers, scarp dealers and aggregators. This would require gap funding from the FMCG producers.



'SAY NO TO PLASTICS' CAMPAIGN

'Say No To Plastics' Campaign

The 'Say no to Plastics' campaign was carried out with volunteers of ExcideLife June 2016 to coincide with the World Environment Day celebrations. The objective of the campaign was to sensitize people about the harmful effects of improper disposal of plastics. The program was designed to facilitate collection of plastic waste from households and commercial establishments and give cloth bags to people participating in the program.

The campaign was carried out in 6 Apartment complexes on 4th and 5th June 2017.



The event saw hug participation from the residents of the apartments, especially children. Plastic waste was collected from the households and sent to recyclers. In return, cotton carry bags with message 'Say no to Plastics' were distributed to spread awareness.

PARTNERS IN 2016-17

Partners in 2016-17



BALANCE SHEET 2016-2017

Balance Sheet 2016-2017

Balance sheet as on 31.03.2017, all figures in ₹							
LIABILITIES	INDIAN	FCRA	TOTAL	ASSETS	INDIAN	FCRA	TOTAL
General Fund as on 31.3.17	15,01,423	50,61,378	65,62,801	Fixed assets as on 31.3.17	3,21,354	14,03,122	17,24,476
Current Liabilities	15,91,178	5,91,894	21,83,072	Current assets	21,99,323	16,173	22,15,496
				Cash and Bank Balances	5,71,924	42,33,977	48,05,901
	30,92,601	56,53,272	87,45,873		30,92,601	56,53,272	87,45,873

FINANCIAL STATEMENTS

Financial Statements

Income and Expenditure Account for the year 31.03.2017, all figures in ₹							
EXPENDITURE	INDIAN	FCRA	TOTAL	INCOME	INDIAN	FCRA	TOTAL
Project Expenses	61,36,672	55,71,795	1,17,08,467	Donations	19,928	80,483	1,00,410
Administration Expenses	11,79,976	47,809	12,27,785	Donations in Kind		2,25,000	2,25,000
Depreciation	59,068	2,10,176	2,69,244	Grants	71,35,960	69,44,012	1,40,79,972
Surplus	149787.59	15,14,978	16,64,765	Consultation Fee	2,87,137	-	2,87,137
			-	Income from E-waste	17,067	-	17,067
			-	Bank Interest	65,413	95,263	1,60,676
	75,25,504	73,44,758	1,48,70,262		75,25,504	73,44,758	1,48,70,262

HUMAN RESOURCES

Human Resources

Salary wise Staff Distribution			
Slab of gross salary plus benefits (₹ Per month) CTC	Male	Female	Total
Up to 10000	9	14	23
10000-25000	2	2	4
25000-50000	4	1	5
50000-100000	0	2	2
100000 above	0	0	0
Total	15	19	34

Gender	Full time	Part Time	Paid Consultant
Male	15	0	2
Female	19	0	0
Total	34	0	2

BOARD MEMBERS

Board Members

SI No	Name	Role	Nationality	Year of Joining	Occupation
1	Mrs. Wilma Rodrigues	Founder member	Indian	2001	CEO, Saahas Waste Management Pvt Ltd
2	Mr. Nagesh Manay	Member	Indian	2001	CEO, Opus CDM
3	Mr. Viswanath Gopalakrishnan	President	Indian	2013	Founder/Director, Organisations & Alternatives Consulting
4	Mr. Subrahmanyam Ivatury	Member	Indian	2013	CEO and Co-Founder, Social Convergence
5	Mr. Ashish Patel	Treasurer	Indian	2016	CEO, CMCA
6	Prof. P D Jose	Member	Indian	2016	Professor, IIM Bangalore
7	Dr. Divya Tiwari	Secretary & CEO	Indian	2016	CEO, Saahas

- None of the Board Members have any blood relations with any other Board Member
- None of the Board Members and staff have made any International travel trips funded by Saahas during this period
- None of the Board Members receive any remuneration from Saahas
- Last Board rotation happened in 2015 with 2 members moving out and 2 new members joining

CONTACT INFORMATION

Contact Information

DIVYA TIWARI
CHIEF EXECUTIVE OFFICER, SAAHAS

Tel +91 7349744270
divya@saahas.org

ARCHANA TRIPATHI
PROGRAM DIRECTOR, SAAHAS

Tel +91 7349744271
archana@saahas.org

Company Information

Saahas
#21, MCHS Colony, 5th C Cross, 16th Main
BTM Layout 2nd Stage, Bangalore - 560076
Tel 080 41689889
www.saahas.org