







Member of

For feedback and comments, please contact the authors:

Wilma Rodrigues	: wilma@saahaszerowaste.com
Krithika Viswanathan	: krithika@saahaszerowaste.com
Gauri Arora	: gauri.arora@saahaszerowaste.com

Contents

A Beginning, a Vision and an Unwavering Focus		
Saahas Zero Waste's Journey		
Founder's Message		
Bringing together a Holistic Business		
 The Business Verticals 		
▶ The Zero Waste Programme – SZW's Flagship Business Vertical		
Extended Producer Responsibility: Plastic & E-Waste		
 Closing the Loop with Products 		
 Strengthening the Spine 		
Embodying the Culture		
 Technology as a Critical Enabler 		
 The Values that Define and Differentiate Saahas Zero Waste 		
 Digging in our Heels and Anchoring Planet and People 		
Let's Transform: Efforts to Integrate Social Inclusion		
 Partnerships that Enable Scale-up and Enhance Impact 		
Bringing a Regenerative Economy into the Vision for the Future		
 Transforming the Ecosystem & Scaling Solutions 		
 Creating Value for the Planet & People 		
Awards		

A Beginning, A Vision And An Unwavering Focus

The current per capita generation of waste in India, which is between 200-600 grams per day, is relatively low¹. Even in the year 2000, amidst the proliferation of plastic around the world, India was conservative in its plastic consumption. The country's average per capita consumption was 3.2kgs as compared to the United States (60kgs), China (12kgs) and the world average (18kgs)².

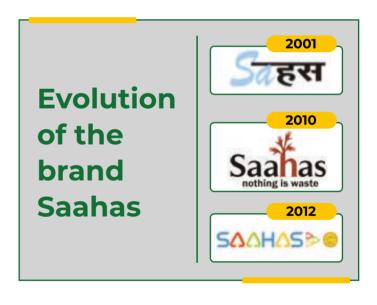
The country's low per capita generation notwithstanding, in 2000, the problem of waste was already huge, and mounting. A large population, compounded by an absence of a waste management system, resulted in horrific dumping and pile-ups of waste across cities and rural landscapes.

The other alarming observation was that very few people seemed to care. Even important stakeholders like industry and governments were unable to bring together a holistic and efficient system that would effectively address waste management. This was the scenario that planted the seed for the organisation Saahas, and the not-for-profit was registered as a society in 2001.

Most importantly, the building blocks of change were triggered by the release of the Municipal Solid

Wastes (Management and Handling) Rules in the year 2000 by the then Ministry of Environment and Forests (MoEF).

The NGO Saahas was set up with the objective of providing support to bulk waste generators including industry and government so that all stakeholders aligned with, and implemented the MSW(M&H) Rules. The principles of 'reduce', 'zero waste', 'resource recovery' and 'circular economy' were embedded in the rules and these became the NGO Saahas' founding principles.



In the early years 2001-2003, Bangalore-based Saahas initiated campaigns and awarenessbuilding programmes in association with the Karnataka State Pollution Control Board (KSPCB) to reduce the use of plastic.

¹Guidelines for Municipal Solid Waste Management, <u>MoHUA -</u> <u>mohua.gov.in</u>

² https://www.researchgate.net/publication/227421226



'Less Plastic For Me' campaign for KSPCB

The organisation quickly moved beyond these campaigns and expanded its scope and focus to creating holistic waste management systems that recognised waste as a resource. Decentralised waste systems were considered the best solution.

Saahas NGO received its first grant cheque of ₹1 lakh from KSPCB in 2002 for the 'Less Plastic for Me' campaign.

State Bank of India - a significant breakthrough

In 2003, the first significant breakthrough came from the State Bank of India (SBI) campus on St. Marks Road, Bangalore, the head office of SBI in South India. A beautiful 10 acre campus in the heart of the city. It even had a heritage building, which housed the Chief General Manager (CGM).

A closer look at the administrative function drew attention to the absence of waste management within the campus. The cafeteria, which cooked food for the employees, generated about 60-80 kgs of wet waste every day. There was also a significant volume of dry waste, especially paper waste. The wet waste was dumped in an open pit and the dry waste was burnt in another pit at the rear end of the campus.

This was the BIG opportunity for the NGO Saahas. Dr Balasubramaniam, a retired NASA scientist had done significant work in Sanjay Nagar, Bangalore, to introduce community composting for about 100 households in the area. Saahas managed to secure his interest in supporting them to set up a pilot project in SBI.

A budget of about ₹1.5 lakhs was identified to set up a composting unit for the wet waste from the kitchen, a leaf shed for the garden litter and a dry waste shed. A very progressive CGM in SBI sanctioned the budget and this then became the **first onsite waste management system in the city of Bangalore.**

The NGO Saahas then reached out to a SHG group, and two women from this group, Chinapappa and Kanaka became the first employees of the NGO. Today, Chinapappa continues as an employee of Saahas Zero Waste.



Chinapappa - Early days in SBI

SBI was a wonderful first example of responsible and decentralised waste management in Bangalore. This understanding gave the NGO a brilliant opportunity to develop and consolidate a holistic waste management system for a corporate campus.



Compost system in the SBI campus

Within a span of 7-8 years, the NGO Saahas had created a strong foundation of experience and expertise, which formed the very basis for the deployment of a decentralised, holistic and sustainable waste management system. The next step was to build on this foundation so as to bring the solutions into the mainstream.

Those early years also threw up some key insights on the functioning of the waste management industry.

 Waste generators, including households and even corporate offices, expected incentives for any behaviour change. This was why scrap dealers and *kabaadiwalas* paid for paper and plastic waste, even though this meant that their key workforce would be denied minimum wages.

- The focus on incentives for waste, resulted in neglect and dumping of any waste that had no incentive or value. This was the case for a large volume of plastic, paper, glass and textile waste.
- The waste generator was able to justify their own irresponsible behaviour by blaming the government who it was believed, was responsible for waste management.
- A portion of guilt was also erased by engaging with NGOs. Donating waste instead of paying for waste management services was more acceptable to the cost-conscious consumer who was unwilling as yet to accept full responsibility.

These insights played a critical role in shaping the business enterprise - Saahas Zero Waste (SZW), whose core principle was to put **'Planet and People above Profits'.** The business model allowed a structured system to scale up and ensured continuity of service delivery, keeping in view compliance with environmental and social regulations. The establishment of the company

Approx. 8 million tonnes of plastic leaks into oceans worldwide each year. The total number of affected marine species is 1,220 and rising. Saahas Zero Waste, also helped fulfil a government regulation which made it mandatory for NGOs to move all business-related activities into a company format, which would prevent any misuse of the 80G (tax free) certification, and taxes as applicable could be levied.

There were now two Saahas entities. It was clear that the NGO Saahas, with its philanthropic approach, had a critical role to play and was needed in the system to work on pilot projects, research, creating awareness and capacity building. Thus, a distinct role for the NGO Saahas emerged, and it continued to work as an independent entity to this day.

Establishment of the Business over two phases

First, Saahas Zero Waste Solutions LLP was registered in 2010, and the services offered were aligned with the Municipal Solid Wastes (Management and Handling) Rules, 2000. The company began offering waste management services to bulk waste generators like large corporate campuses, tech parks, residential communities and educational institutions among others. The service model had two revenue streams - income from a service fee and income from the sale of waste. This twin revenue system allowed the organisation to meet environmental and social compliances. It also helped meet the company's operating costs and eliminated the need for philanthropic support.

In the next few years, Saahas Zero Waste brought on board Sattva Consulting, who played a critical role in identifying projects from the NGO Saahas, which had to be moved to the business.

The NGO Saahas had engaged with some corporates like SBI, Microsoft and Texas Instruments and was already receiving a service fee for extending waste management services. These companies became the first customers of the LLP under its first service line, the Zero Waste Programme. Likewise, Tetra Pak became the company's first EPR (Extended Producer Responsibility) partner, paying a service fee per kg of the waste that was channelised to recycling. This was a very forward-looking initiative by Tetra Pak at a time when EPR as a regulation did not even exist.



Delivering EPR services for plastic waste

Page 4 -



Microsoft Research India campus

IT sector moves into responsible waste management

In 2007, Microsoft Research India in Bangalore approached the NGO Saahas as they were keen to practice and implement responsible waste management. The NGO worked with them to reduce single-use paper and plastic products. This was followed by implementing segregation at source in break-out areas, the food court and other points of waste generation. An intensive in situ programme was then implemented, which included management of all the campus dry waste. When Microsoft Research India moved to



Bio-CNG plant at the Microsoft Research India campus

India generates 63 million tonnes of waste per year. By 2050, global waste levels will reach 3.4 billion tonnes per year unless waste generated per person is managed sustainably.

their own campus, Saahas Zero Waste moved with them and set up an in-house composting and bio–CNG system. 16 years on, Microsoft Research India continues to be a loyal customer. The work at their Bangalore campus continued even through the Covid pandemic, and soon SZW's waste management services were extended to the Microsoft India (R&D) campus in Hyderabad. Today, Saahas Zero Waste manages an average of 4MT of waste a day across both the Microsoft campuses in Bangalore and Hyderabad.

"Saahas has worked with us from the start to assist us in building a robust waste management programme within our corporate campus at Embassy Golf Links in Koramangala. Through its teams, Saahas was able to build a strong sense of ownership and awareness across all stakeholders including employees and support staff. Now more than ever, we sincerely appreciate the support and service that Saahas has extended to Microsoft India."

> – Vinod Mathews Former Head-Facilities, Microsoft India



IIMB campus

Another loyal customer that has worked with both Saahas entities for 17 years is the **Indian Institute of Management Bangalore (IIMB).** This premium business school is spread across 100 acres with residential units, hostel blocks, canteens, cafes and administrative blocks. In 2008, the solid waste generation on the premises was, on an average, approximately 1.5MT per day. As at Microsoft India, Saahas Zero Waste continues to deliver a comprehensive waste management system at IIMB, which includes door-to-door collection of segregated waste from households, secondary sorting of all dry waste, composting of wet waste, Bio-CNG and 95% resource recovery from the collected waste. In the last financial year, a total of 90MT+ of segregated dry waste from the IIMB campus was diverted from landfills.

Page 6 —

Move from LLP to Private Limited

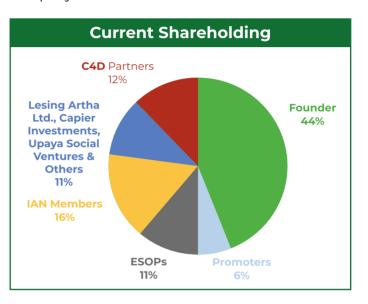
It took three years for the NGO Saahas and Saahas LLP to be split and work as two independent entities. Both organisations started building their respective teams, workspaces were separated and financial independence became critical.

The business had a slow start. On the one hand, acquiring customers who would pay for services took a long time. On the other, there were some essentials required for running the business a more professional team, the setting up of a Material Recovery Facility (MRF) and a robust MIS system which would trace and track the waste. All this needed capital. Unfortunately, banks always looked at business models which built assets and were unwilling to engage with this kind of a service model. Plan B therefore was to look for investors who were also aligned to social impact. It was time to move the LLP into a private limited company which could attract investment.



Raising Investment

In 2014, Saahas Zero Waste Pvt. Ltd. raised its first seed round of Rs 2.1 crores from the Indian Angel Network (IAN). This round was led by Nagaraj Prakasam who continues to be an ambassador for the organisation. The company was also fortunate to have impact investors like Lesing Artha Ltd., Upaya Social Ventures and Asha Impact soon join in a bridge round. In 2018, C4D Partners invested in Saahas Zero Waste with a larger round of $\overline{\xi}4$ crores. Thus, during the period 2014-18, the company raised a total of $\overline{\xi}8$ crores.



The investment was a game changer which kickstarted the building of the organisation. The focus then was to recruit the senior team first. Shobha Raghavan joined the organisation as BD manager, Arun Murugesh joined as lead-marketing and Kannika who was also one of the promoters of the organisation took on the finance portfolio. The domain knowledge which had been acquired through the NGO Saahas became a critical cornerstone for the private limited company to build on. All that was needed was to sharpen the business acumen and this is where the business coach P. Gopalakrishnan who had recently retired as

the CEO of WeP Peripherals Ltd. played an integral role. He worked with the leadership team to strengthen areas like financial reporting and data analysis.

The organisation then engaged K S Ramanan as a Human Resources consultant who worked on the team aspects such as employee engagement, capacity building and organisation structure. Through engagement and consultation with the core team, a framework called RIIIHT (Resilience, Impact, Integrity, Innovation, Humility, Team) was introduced, which became the core values guiding the whole organisation through the growth years, and continues to do so.

Nagaraj Prakasam from the Indian Angel Network and Arvind Agarwal from C4D also joined the board of SZW Pvt. Ltd. and supported the focus on impact.

Additionally, investment was made in web-based technology which integrated business processes, people, and technology for effective organisation-wide data capture and reporting.

Wilma Rodrigues - Founder & CEO

Wilma Rodrigues was a journalist with the Times of India group and the Business World magazine in Mumbai, before moving to Bangalore in 1995, and setting up Saahas NGO in 2001. Wilma leads from the front, and strongly believes that, in the 21st century, businesses must not just talk but also deliver on environmental and social impact.

Shobha Raghavan - Chief Operating Officer

Shobha Raghavan is an electrical engineer and had worked in the engineering and IT industry before joining Saahas Zero Waste. With a background in business, engineering systems and technology, Shobha brought in a strong system focus and spearheaded the adoption of technology across the board for accurate and real-time reporting. She continues to strategize the overall operations at Saahas Zero Waste to ensure its growth and scale-up in a niche industry.

Arun Murugesh - Vice President, Sales

Arun started his career with SZW in marketing and communications, and then moved on to the development of the EPR (Extended Producer Responsibility) business vertical. With around 15 years experience in the waste sector in India and the UK, Arun was instrumental in setting up Saahas Zero Waste's one-of-a-kind Materials Recovery Facility in Bangalore with a capacity of 16MT of waste per day, which was a crucial piece in processing the dry waste collected.

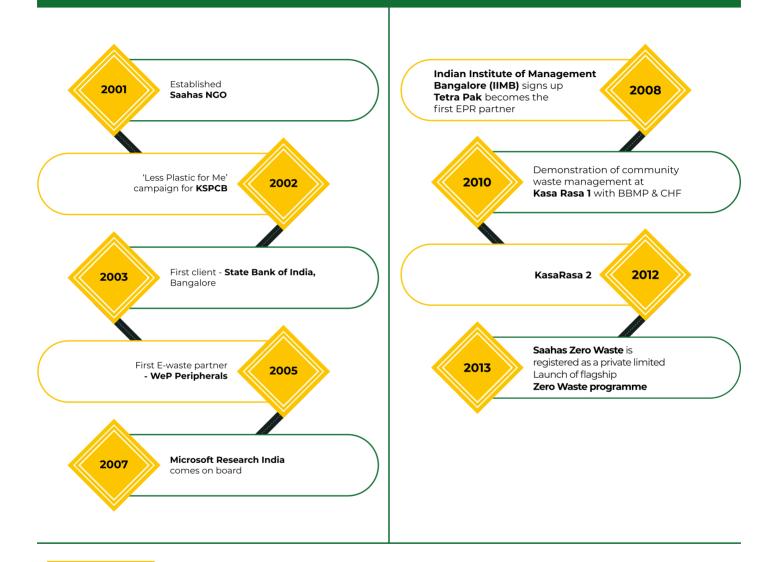
Kannika K P - Associate Director & Lead Finance

A postgraduate from the Karnataka State University, Kannika had worked in the development sector for over 15 years in the areas of finance, accounting and administration, before becoming a part of Saahas Zero Waste in 2015. Kannika's focus is to ensure that the company stays on target while maintaining profitability as well.



Leadership team

Saahas Zero Waste's Journey



SZW Pvt. Ltd. won its first round of bridge funding of ₹1 Crore on the **'NDTV show - The Real Deal'** in 2015.

Page 9



Wilma Rodrigues on the exciting, challenging & transformative journey

Waste management is a critical and complex problem, and the opportunity to structure a solution, build and guide a team, and be the catalyst for change, provided exciting possibilities. Over the years, I have found a deep sense of fulfilment in transforming waste and enabling resource recovery.

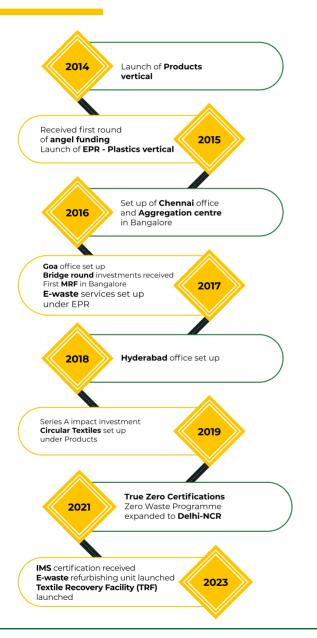
In 2013, the decision to register a second Saahas entity as a business model was not easy. I had no formal background in business management, nor experience in running a for-profit entity. What I did have though, was deep domain knowledge and onground experience with waste. More importantly, I had faith that this model was the need of the hour and did have a sustainable future. This is what I presented to potential investors and I was fortunate that they believed in me and in the business model. I then faced each day with renewed energy, having put behind the challenges of yesterday.

This enterprise has now lived, even thrived, through ten years. I am sincerely grateful to our team, our customers, partners and investors who have worked with us to shape this ecosystem for zero waste and resource recovery. We have, over the years, designed innovative solutions, worked towards strengthening the ecosystem, broadened our partner network and continuously strived to improve our processes and systems. Together, we are now a force, with a huge potential to bring this into the mainstream.

"Where the head and heart work together, a formidable force is created." - Nelson Mandela.

Page 10 —

Bringing Together a Holistic Business





The Zero Waste Programme: SZW's Flagship Business Vertical

The Zero Waste Programme (ZWP) was developed and piloted by the NGO Saahas. Subsequently, Saahas Zero Waste engaged with the first customers and grew the programme significantly. This continues to be SZW's flagship programme, demonstrating the maximum impact. The organisation works with large bulk waste customers, (i.e. entities which generate more than 100 kg of waste per day) such as technology parks, residential apartments, educational institutions and malls, with a dual focus: 95%+ resource recovery, and creation of professional jobs and livelihoods.

The big value add of this programme lies in the complete accountability to the waste. Wet and dry waste is tracked and traced right upto an authorised end destination.

Supporting RMZ Corp on their sustainability path

One of the first customers of this programme was the RMZ Corp, a tech park developer and manager, driven by the vision of becoming the first zerowaste tech park campus in India. In 2014, the team at SZW led the design and execution process for a holistic, end-to-end waste management system to help them reach their goal.

Ecoworld was the first RMZ campus that engaged with SZW. This property had about 20 million sq. ft. of assets that generated approx. 10 tonnes of waste per day. The challenge with Ecoworld, like other tech parks was the fact that the actual waste generators were RMZ's clients, i.e. the residents, and the developer was only an aggregator. Additionally, waste was a low priority for most stakeholders. The budget allocation focused only on waste collection and disposal.

SZW therefore had to bring in the complete system of collection, segregation and processing within the campus itself. To introduce any changes to the existing practices, it became imperative to encourage a behaviour change with all the stakeholders. An ideal flow of the waste was created, along with the requirement of associated infrastructure to enable smooth collection, transport and processing. Most importantly, correct policies and processes were created and put in place, and then communicated to all clients.

In 2020, Ecoworld became the first Gold Standard True Zero certified tech park in India. The work at Ecoworld continues even today as it did right through the pandemic. "In 2016, we at RMZ took a conscious decision to implement the best practices in waste management. We are proud of our waste management systems and for having been able to divert 95% of our solid waste away from landfills.

We are also deeply grateful to Saahas Zero Waste for their efficient and holistic on-site services, and for being with us in this journey right from when we started out with an idea. Their attention to detail brought down our proportion of Reject waste from 60% to just 6%."

> - Jiji Thomas Former Vice President, RMZ Corp.



Primary Sorting by Saahas Zero Waste in Ecoworld.

Material Recovery Facility (MRF): A Critical Part of Dry Waste Management

SZW set up a 16MT per day MRF in Bangalore in 2018. The MRF is at the heart of the company's dry waste management system. It is a mechanised processing factory for the dry waste, which focuses on complete resource recovery. Segregated dry waste from the ZWP customers is channelled to the MRF for further intensive sorting into 30+ categories. This deeper level of sorting is required in order to reach 95% resource recovery. In addition to the ZWP customers, the MRF is also the end-point for waste generated from the local community. The MRF then serves as an aggregator or marketplace for the purchase of sorted, aggregated and baled waste for dry waste collection centres and scrap dealers.

The MRF has a robust MIS system, where data on waste quantities and types, tracking and tracing the movement of different waste streams across the country, along with backup documentation is regularly monitored through digital applications.

Adding Value to the Zero Waste Programme: Providing Consultancy Services

Further value-added services have been added into this umbrella programme, one of which is a separate division for consultancy services. These services are availed of by government departments as well as the private sector to help them set up and operate integrated waste management facilities.



Consultancy with the State Government of Karnataka for establishing 4 pilot MRFs in Udupi, Ramanagara, Mangalore and Ballari

SZW is in partnership with the **Rural Drinking Water and Sanitation Department (RDWSD)** as technical consultants to help establish MRFs in four districts. These facilities are critical in the entire supply chain of municipal dry waste from the Gram Panchayat to the authorized recyclers. The Udupi MRF was the first one to be set up in 2021, and it now manages 6 tonnes of waste per day. The facilities are managed by Mangala Resource Merchant Management Pvt. Ltd. in association with Saahas Zero Waste.



Saahas Zero Waste's state-of-the-art MRF in Jigani

The evolution of Saahas Zero Waste is reflected in the fact that the company was awarded the **IMS certification in 2023** for Quality, Environmental, Occupational Health & Safety Management Systems according to ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018, a first in the holistic waste management segment. This is a recognition for SZW's management systems and process implementation, as well as sharp focus on quality, health & safety.

Extended Producer Responsibility (EPR): Plastic & E-Waste

This business vertical collaborates with waste generators, the informal sector and authorised recyclers to provide end-to-end holistic services, from EPR registration on the government's online portal to design of the action plan to implementation, reporting & audit requirements and certification. A robust MIS ensures material traceability, data monitoring and digitisation of data through a software platform and IoT. The team also conducts extensive awareness programmes which include social media campaigns, corporate events and collection drives.



The initial work with EPR brought the organisation closer to understanding and engaging with the informal sector. The result was deep introspection which resulted in the beginning of the company's work with social inclusion.

Closing the Loop with Products

'Closing the Loop' is SZW's third vertical which focuses on bringing back resources from waste and putting them to functional use. The business vertical is not so much about selling products,

Page 14 -----

but more aimed at encouraging and supporting consumers to choose alternative and more sustainable lifestyles. This vertical also includes a model to upcycle and recycle pre and postconsumer textiles and apparel.

Textiles

Annually, India generates 8.5% of the total global textile waste, which amounts to a staggering **one million tonnes every year.** Out of this, post-consumer waste accounts for 51%. The majority of this waste is either incinerated or put in landfills, and **the recycling rate for this textile waste is less than 1%.***

Additionally, the social indicators around recycling of textile waste are very poor, and 90%+ of workers in this segment are from the informal sector.

SZW's journey in the textile waste sector started in 2019, when the organisation began working with the collection of end-of-life textile waste. Over the years, the growing volumes of this waste made evident, the glaring need for a dedicated facility for managing textile waste. In 2023, SZW set up a Textile Recovery Facility (TRF), one of the first-ofits-kind in India, to process post-consumer textile waste and maximize textile recovery.

The facility has the systems and infrastructure to segregate and sort textile waste for reuse, repair, upcycling and recycling. A dedicated supply chain has been developed, which includes collection and processing through manual and technological interventions, to defined end destinations for the processed textile waste. The team works with several SHGs to develop and market upcycled

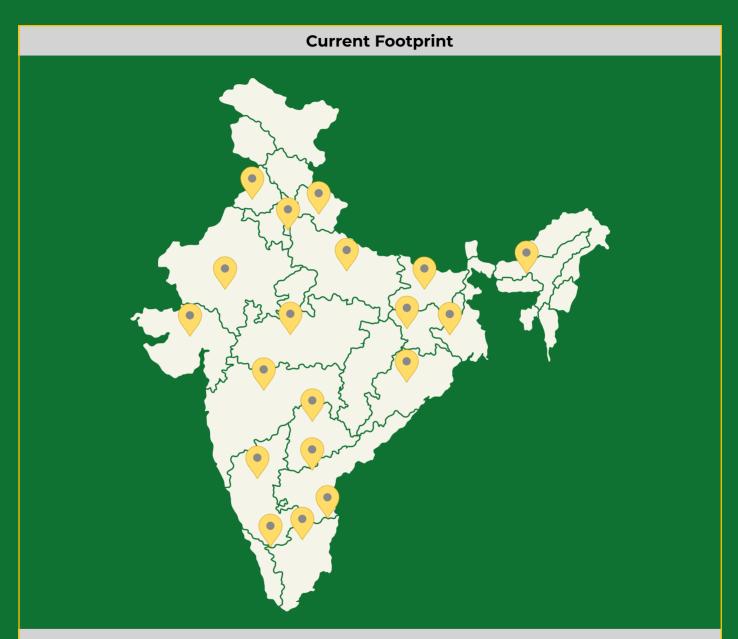


A style statement at any celebration - our upcycled bells are crafted from waste fabric.

textile products. Through this facility, the company has upskilled people from the base of the economic pyramid, creating better employment opportunities for them in the formal sector.



*Wealth in Waste Report by Fashion for Good (https://lnkd.in/ecYT3VrN)

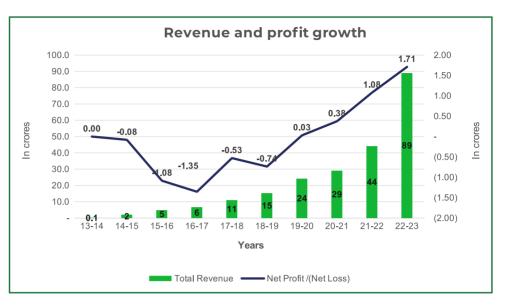


SZW's client base which began in Bangalore, has extended significantly across India over the last ten years. The company is present in 20+ states from Tamil Nadu and Telangana in the South to the NCR region in the North, Assam in the East and Maharashtra in the West. And now, the Resource Recovery and Social Inclusion programmes are well placed to be introduced in every urban and rural landscape of the country.

Strengthening the Spine

Staying true to the organisation's values, along with achieving impact, has been a persistent thread in SZW's journey over the last ten years. The business model evolved through the development of solutions that could deliver both environmental and social impact. But the company had to keep a tight watch on its P&L.

It has been a difficult hill to climb. From an annual revenue



of ₹1.97 crores in 2014, the company is now inching towards the ₹100 crores mark – the financials of SZW indicate the rigorous discipline that was exerted to bring it to this point.

Some Insights

The company was quick to understand and evaluate government policies as well as trends in the industry, and align the business verticals to these. The ZWP and EPR verticals are a result of this.

The leadership team focussed on revenues which were essential for a sustainable business model. For instance, the insistence on a service fee. Likewise, the organisation was conservative on expenditure, which is reflected in the salary structure and focus on productivity.

A key thrust has been to continually strengthen the business divisions and move up the value chain. Consulting and Products are examples of this, which gave a better top line with healthy jumps year-on-year. Likewise, collaboration with conscious brands to bring social inclusion enabled the integration of the producers' plastic obligations with the elevation of the informal sector into formal.

While Saahas Zero Waste has now established a sustainable business model, the company continues to place a high value on impact created through the operations, while at the same time, being conservative about spends.

Embodying the Culture

SZW's operations are intensive and people driven, with technology playing a critical but supporting role. The focus of the leadership team has always been on good quality jobs for all – for the qualified and experienced professionals, but equally for people with a limited academic background.

- SZW has consistently invested in people whose skill and will is aligned to the organisation's purpose - women and men looking for a second career, as well as youth.
- The company has also always ensured that it is completely compliant with all the labour laws, i.e. minimum wages, social security etc. across all geographies where it operates. At SZW, the ratio of the average median salary to the highest salary is 1:8, in an industry where the average is 1:100

Saahas Zero Waste has managed a colossal **151,465+** metric tonnes of waste since its inception.

Upward mobility of the field team

The SZW leadership has always believed in the power of their people, and in rewarding commitment along with performance. Recognising that the informal workers usually have little or no academic background, training programmes are designed to impart the requisite skills for them to carry out their responsibilities effectively and efficiently, as well as to periodically move up to the next level.



Hiring a special bus for the field staff during the Pandemic

Meet the field team members who have moved up the ladder:



Rajeshwari

Joined SZW in 2016 as a field supervisor and was promoted twice to reach her current executive position of Assistant Project Manager. Rajeshwari now oversees the operations of 3-4 locations, and has other field supervisors reporting to her.



Chalapathi

Joined SZW as a Supervisor in 2013, and has now risen to the position of Senior Project Coordinator, managing the EHS training and implementation of protocols for the entire field staff.



Ramesh R

Joined the NGO Saahas in 2012 as an Office Assistant. He moved to the private limited in 2015 and quickly moved up from Compost Trainer and Supervisor, to Senior Project Co-ordinator.



Elizabeth

Joined the organisation in the field Operations, but was soon promoted as Project Coordinator in the Administrative department.



Murthy Raj

Joined SZW in 2018 as an Office Assistant. He was promoted to Project Co-ordinator in finance and is now a Senior Project Co-ordinator in the department.



Deepa

Being a single mother, Sumati found it very difficult to make two ends meet, while taking care of her children and family. She joined SZW as a field staff in 2016, and was promoted to Supervisor in four years. One of her daughters now has a graduate degree and one of them is in ITI.



Ramesh B R

Started with SZW in 2015 as a Supervisor. He received many promotions from Project Co-ordinator in logistics to Senior Project Co-ordinator and is now an Assistant Operations Manager.

Technology as a Critical Enabler

In the very early years, the leadership decided that systems and processes had to be a priority for an inclusive business and these were non-negotiable requirements. Therefore, technology came next and is now used extensively to support and enhance operations.



IOT Weighing scale

The company adopted SaaS for organisation-wide, real-time MIS and tracking. This came with CRM for sales, and a host of tools for support functions like HR, marketing and accounts. Blockchain technology was also introduced, which provided greater value across the supply chain - enhanced transparency for the collection centre; improved compliance on ESG and EPR for clients; accountability and ease of operations for the organisation as well as improved incentives due to additional transparency for partners.

The Values that Define and Differentiate Saahas Zero Waste

In 2001, the founders chose to name the organisation Saahas, and chose to tread the difficult path, when no one else was thinking about it. This name, which means courage, continues to define the organisation's work and commitment. There is no fear - to stay on course as well as walk the uncharted path when it is the only right thing to do.

The company SZW chose to work with decentralised waste management systems, when the concept itself was in an amorphous stage in India. Determination and tenacity has brought the company thus far.

The differentiator is SZW's core values – Values that put the planet and people above profits, values that give courage to the team to stay the course.

A very special moment for the entire team at SZW was when the company attained its first monthly revenue milestone of ₹1 crore in December 2017. This was due to two primary reasons – receipt of service fees under EPR from clients like Abbott Laboratories, HUL, Mondelez, Nestle, as well as service fees received on account of RMZ Corp's 9 buildings operating at full capacity.

RIIIHT - Our Core Values



R – Resilience – The defining characteristic of resilient players is having the ability to bounce back and re-focus after a change. The belief lies in not just bouncing back but bouncing forward. We are motivated to turn challenges into opportunities and continue with the organization's mission and vision. Adaptation, maintaining continuity and focusing on safeguarding our people and our operations.



I – Integrity – Integrity is about doing the right thing, in an honest, fair, and responsible way. A foundation of honesty and integrity goes a long way towards building a strong, trusting relationship with employees, stakeholders, and customers. Integrity in every aspect of our operations also fosters an open and positive work environment amongst the employees.



I – Impact – This is the fabric of the very existence of Saahas Zero Waste – to make a significant impact on the communities that we operate with, as well as achieve the economic and environmental impact outcomes outlined in the company's mission.



I – Innovation – Innovation is absolutely essential to foster growth. SZW will continuously research for new processes and new ways of doing business, while keeping the needs of the organisation and environment in perspective. Finding a new approach, a better way or a game-changing solution is what motivates us to achieve more, also allowing us to drive additional value for our customers.



H – Humility – Humility for SZW means being confident and respectful, acknowledging our own strengths and skills, while constantly learning and seeking out new knowledge. This means establishing our credibility through predictability and integrity.



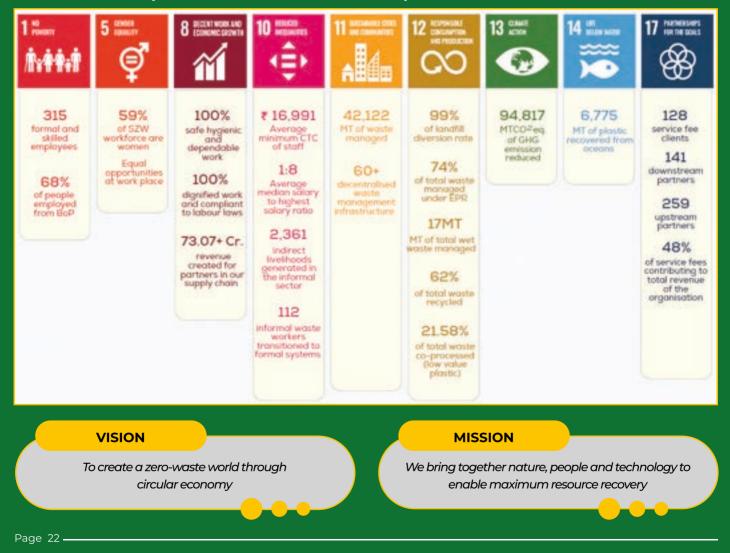
T – Team – SZW has always believed that people are at the forefront of our business – our own field staff and management, the eco-system we work with, and our customers. Diversity and inclusion are the fabric of the organisation's growth strategy across all functions and roles.

The informal or unorganised sector, which contributes to approx 84.7% of jobs in the Indian economy, has no job security, no minimum wages nor safe working conditions.

> - ILO Monitor: COVID- 19 and the world of work, April 2020

Digging in our Heels and Anchoring Planet and People

Saahas Zero Waste's belief is that, in the 21st century, nature and by extension, planet Earth must be recognised as an important shareholder of any business. SZW's business model looks to bring alive a regenerative economy, where resources are put back and the benefits of the business are shared with all stakeholders. And the company has been extremely fortunate that its investors, customers and workforce align with this commitment.



Impact on the Sustainable Development Goals in FY 2022-23

Let's Transform: Efforts to Integrate Social Inclusion

India generates 63 million tonnes of waste per year of which, about 40% is dry waste in the form of paper, plastic, metal and glass. The informal sector forms the backbone of the dry waste management segment. They play a critical role in the collection and channelization of the dry waste. The entrepreneurs and waste workers in this informal sector have traditionally looked at waste as a 'resource' and have honed their self-learned abilities to be able to distinguish and sort different kinds of dry waste materials efficiently.

Despite the critical role played by these workers, their operating conditions including formal recognition of their work, health and safety conditions and earnings, remain paltry. They are marginalised from society and continue to remain at the bottom of the social hierarchy. In addition, the income generated from the sale of the recyclable waste is barely enough for their subsistence, and insufficient to establish a proper, ethical waste supply chain.

Saahas Zero Waste has consistently pushed for service fees to be integrated into any waste management business model. The revenues from the sale of waste to recyclers plus the revenue from a service fee, enable the company to run a completely formal business with measurable environmental and social impact. With these experiences, SZW put together 'Let's Transform', an umbrella project, through which the company works with entrepreneurs to hand-hold them as they transition from the informal to formal systems. Currently there are several entrepreneurs in Karnataka who are in the incubation stage under this programme. Each of these entrepreneurs had existing waste sorting and recovery businesses which were running profitably albeit very informally.

The key objective of the 'Lets Transform' programme is to increase the participation of the workforce in the formal sector, through the provision of formal jobs and benefits. This initiative provides an opportunity for the informal workers to transition to formal entrepreneurship models, thereby enhancing not only their income but their social security as well.

One of the first entrepreneurs to be inducted into the programme was Hassan in Bangalore, whose journey was supported by an EPR client Asian Paints.



Hassan Khan's transformation

Informal Status before the Pilot Project

Hassan started working in the waste vsector in 2010 as an informal worker. He managed 16 MT of dry waste per month on an illegally constructed facility in Begur, Karnataka. He had about 17 temporary workers working in extremely unsafe and unhealthy conditions. They collected dry waste mainly from open dumps, streets and purchases from other waste workers.

Formal Status after the Pilot Project

Regular capacity building by SZW encouraged Hassan to operate the new facility as per defined social and environmental standards, which in turn, helped him enhance his overall business.

Hassan Khan is now an authorised entrepreneur in an industrial area in Jigani, Karnataka. He currently manages all types of dry waste and has also partnered with the local municipal corporation. He provides a healthy working environment to his field staff and pays all his employees a regular salary which complies with minimum wage regulations.

During the pandemic, Hassan's operations ceased, leading to heavy financial losses and he was forced to move back to his earlier ways of working in the waste worker colony. However, in 2022, SZW worked with Hassan to revive his business which he was able to transition again into formal operations. He has now shifted to a new facility.

To view Hassan's story, visit: https://saahaszerowaste.com/ wp-content/uploads/2023/08/Lets-Transform_SI-Case-Study_ Hassan-Khan_SZW.pdf

View AEPW case study: https://saahaszerowaste.com/wp-content/uploads/2023/08/AEPW-SI-project_Apr2023.pdf

Page 24 —

Based on the experiences with Hassan in 2019, the programme inducted 16 entrepreneurs between 2021 and 2023. These entrepreneurs were supported by the Alliance to End Plastic Waste (AEPW), Vishuddh Recycle Pvt Ltd. and Pepsico (India) Holdings Pvt. Ltd. The Incubation Network (TIN) also supported SZW with a SHG inclusion programme in Udupi. Many of these young men and women continue to be part of the SZW network.

In 2022, SZW partnered with IKEA Social Entrepreneurship B.V. This partnership consists of a two-year intensive incubation programme for micro-entrepreneurs working with waste. The objective of this incubation programme is to demonstrate an approach where microentrepreneurs who work within the informal sector now have access to financial as well as managerial support so that they can have a formal and a healthy business.

An investment of €1.1 million from IKEA Social Entrepreneurship was used to set up 3 plastic recovery facilities for 3 entrepreneurs in Tamil Nadu and Karnataka. Each of the entrepreneurs were given access to the appropriate technology in the form of machinery and data management for tracking and tracing the waste. They are shadowed and closely supported in their daily business operations by Saahas Zero Waste.

Each entrepreneur will have the capacity to manage about 1000 MT of plastic waste per year, with a landfill diversion rate of about 95%. This will address the grave issues of ocean-bound pollution and plastic pollution. **This also means a**

total GHG emission reduction of 8,800 MT and direct employment to 60 people from the base of the pyramid.

For IKEA, this will be a source of secondary raw material in the region, and will provide detailed traceability to the plastics sourced, supporting their ambition to work with sustainable raw material and become a circular business by 2030.

Meet the entrepreneurs of the programme



Journey of Chanda Anand Anchan – Shri Siddhi Nagara Sthree Shakthi Group

Chanda pioneered waste management and women entrepreneurship in the city of Udupi. She initially started with door-to-door collection of unsegregated waste. Later, her efforts were recognised by the government and she was allotted a collection centre for segregation of waste. She was selected as a project partner for the IKEA project and now has a 6,000 sq. ft facility, which is equipped for the recovery of plastic.



plastic recovery facility

Sharan is a young first-generation entrepreneur with an engineering degree. He was earlier working in the automobile industry. He began this journey in Mysore working on collection, sorting and processing of plastic waste, before sending it to the recyclers.



Ranjith-Fulfilling the entrepreneur dream

Page 26 -

Ranjith did not have any previous experience in working with plastic waste, but he had a keen interest in becoming an entrepreneur and had been trying his hand at various businesses. In a previous job, he had been exposed to plastic waste and was now committed to be part of the circular economy.

Partnerships that enable Scale Up and enhance Impact

An important aspect of SZW's approach is to share the gained knowledge and expertise with aligned partners so that the learnings can be mainstreamed and the reach for our solutions widened.

To this end, the company has built strong partnerships with the government, industry and with the informal sector.

Knowledge Partners with the Government

SZW's design and format of small to medium MRFs are now well established in rural Karnataka. In 2021, the company set up a 10TPD MRF in Nitte, Udupi. Likewise Mangalore, 5TPD (2022) and in 2023, 3TPD in Ramanagara. These MRFs are an outcome of a partnership with the **Karnataka State Rural Drinking Water and Sanitation Department (RDWSD).** Through this hands-on association, SZW shared its knowledge and worked closely with the RDWSD to set up the MRFs.

First, the RDWSD chose a local partner through a tendering process to operate the facilities, and then Saahas Zero Waste trained the operator and shared processes to ensure stable services with environmental and social impact. Mangala Resources has been operating the MRFs bothin Nitte, Mangalore and Ramanagara.

Here, the NGO Saahas played a critical role as a partner and worked with the local community to drive segregation at source.

Outcomes of the partnership:

- 1. Proven technical designs of the MRF customised as per requirement with capacities ranging from 2 to 10 MT/day
- 2. MRFs are integrated with the existing *Swachha Sankeerna* (waste collection centres) to optimise MRF construction costs and enable the supply chains for waste.
- 3. Designed various business models that will help scale-up of the MRFs to many other districts in Karnataka
- 4. Roll out various tenders and implementation models including selection criteria for operators, which will ensure an inclusive model hence enabling 'Social Inclusion' in the process.

We are the proud operators of the country's first rural MRF which benefits 47 villages of the Udupi zilla panchayat. I appreciate the commitment of SZW for introducing such concepts which provide sustainable solutions for dry waste recycling in rural India. I do hope more such projects come into our state and in the country for sustainable living.

> - Ranjan B. Executive Director, Mangala Resource Management Pvt. Ltd.

Building the eco-system with industry

Resource Recovery through recycling is complex. The materials which are aggregated in the MRF need to be moved to different destinations. Each material type needs a different destination. Plastics especially are complex and need interim prerecycling processes (secondary sorting, shredding and baling) to support maximum recovery.



S7W established relationships has strona IKEA Social with large corporates like Entrepreneurship, industry associations such as The Incubation Network (TIN), Alliance to End Plastic Waste (AEPW) and the India Plastic Pacts, and equally with end destination partners like Carbon Masters for Wet Waste, and recyclers like Vishuddh Recycle Pvt. Ltd., GEM and Alliance Fibres.

Strengthening the grassroots

Strong upstream and downstream partnerships go a long way in supporting the shaping and strengthening of the eco-system. SZW's vendor partners are those who deliver the services at both ends. Pan-India logistics partners, aggregators, scrap dealers are critical to channel the waste for the EPR vertical.

Bringing a Regenerative Economy into the Vision for the Future

India is the fifth largest economy in the world with a GDP of more than USD 3.5 trillion (2022). From a growth perspective, India has done well but the benefits of this growth are not evenly distributed. This is reflected in the per capita income of approx. \$2,300 which is dismally low, and has resulted in a society where the country has a small minority of very wealthy people but an overwhelmingly large number of people who have no access to even basic needs.

The COVID pandemic further exacerbated the problem. According to the Oxfam 2022 Report, during the pandemic, the wealth of billionaires in India more than doubled from ₹23.14 lakh crore to ₹53.16 lakh crore, while more than 40 million Indians are estimated to have fallen into extreme poverty.

In this 75th year of independence, targeted efforts are required to elicit a change in the character of the country's workforce. The government, through labour laws and other comprehensive legislations may give the roadmap but the enforcement of these regulations is a gap. Additionally, responsible behaviour from all other stakeholders is crucial. Currently, industry, households and the society at large continue to negotiate for cheap services. This expectation leads to informal working systems where economic considerations take precedence over compliance with labour and environmental regulations. This scenario is especially stark in the waste management sector in the country.



Informal waste workers recovering plastic

In 2021-22, Saahas Zero Waste was recognised as a growth champion by the Financial Times and Statista. After an intensive due diligence process, the company was included in the list of top 500 high-growth companies in Asia Pacific. In the last three years, SZW has grown from ₹21 crores in 2019-20 to ₹88.78 crores in 2022-23. SZW is now well on its way to becoming a ₹100 crore company

Page 28 -

in the next two years.

It is SZW's vision that this growth however, must not come only through the obvious expansion of new geographies and new customers, but more so, through the development and deployment of solutions that reduce the generation of waste. This growth must also be driven by the principles of a regenerative economy where planet and people MUST stay above profits. This is the challenge which excites the SZW team as much it brings a fresh resolve to stay rooted in courage and the company's fundamental values.

Mainstreaming the Model				
Onsite Waste Management Expanding the flagship ZWP across Mumbai, Pune and Delhi NCR	Neglected Waste Streams Focus on working with difficult waste streams like glass, C&D, textile waste etc.	Enabling Closed Loop Recycling Setting up Plastic Collection Centres across India	Tech for Traceability Leverage own traceability platform and introduce to all customers	
Social Inclusion Replicate and scaleup Social Inclusion programme beyond plastic waste entrepreneurs	Extending Life of Waste Set up several Refurbishing Centre for e-waste	Value Addition in Supply Chain Set up a fully operational Textile Recovery Facility in Bangalore for collection and sorting	Partner with Government SZW's experience on ground will translate to support government, institutions and ULBs	

Transforming the Ecosystem & Scaling Solutions *Planet and People above Profits.*

Clearly, waste management is one of the biggest challenges that India's cities and towns face today, not just in terms of environmental and aesthetic impact but also the huge threat to public health. Saahas Zero Waste's experience in this segment has thrown up the realisation that, as in other industries as well, regulation alone cannot bring change. The real change must come through the effective implementation of the regulations by the various stakeholders. So, what is it that will accelerate the process of execution and lead meaningful change?

Individual responsibility: Ownership and accountability

Every consumer must gain awareness of the issue at hand, and live within a framework of consciousness. This will require strict compliance to regulations and a commitment to behaviour change.

Sustainability integrated into business

Industry is expected to shift its approach in line with its commitment to the principles of ESG. This means a greater focus on planet and people, with profits being shared equitably across all stakeholders.

Policy

At an administrative level, regulatory bodies and governments must step in not just to frame policies, but also to ensure stringent implementation and compliance.

Creating Value for the Planet and for all People

For Saahas Zero Waste, waste management is synonymous with resource recovery. More than half of the world's total GDP, amounting to about US\$ 44 trillion is moderately or highly dependent on nature. Recovery of resources enables giving back and makes us citizens accountable to the materials we receive from nature.

Let us now use our collective intelligence to work together and commit to doing things fundamentally different, so as to be completely accountable to the resources we receive from nature. **This is what it will take to build a new circular economy.**



Our Quality, Environmental, Occupational Health & Safety Management System is certified according to ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018

Saahas Zero Waste was awarded the IMS certification in 2023, a first of its kind in the holistic waste management segment. This is a recognition of the company's management systems and process implementation, as well as sharp focus on quality, health & safety.

Awards

The Global Citizen Prize - 2017

The Global Citizen Prize celebrates remarkable changemakers who are taking exceptional actions to end extreme poverty NOW.

These extraordinary citizens keep the world's poor at the forefront of their life's work, take exceptional actions to end extreme poverty in their own communities, and foster social change across the globe.



Wilma and Shobha were invited to New York to receive the award

The Swachh Bharat Award - 2018

Saahas Zero Waste was recognised by the Ministry of Housing and Urban Affairs (MoHUA) for their work with decentralised waste management and onsite systems of bulk generators.



Receiving the Swachh Bharat Mission Award

Social Entrepreneur of the Year - 2022

The Social Entrepreneur of the Year - India Award is a joint initiative that has been introduced through a collaboration between Jubilant Bhartia Foundation and Schwab Foundation for Social Entrepreneurship (a sister organisation of the World Economic Forum)

The award is given with the objective of recognising promising and successful social entrepreneurs, with excellence in large-scale, system change models.



Wilma Rodrigues was recognised as a finalist in 2022

UNDP – Business Call to Action

Saahas Zero Waste is acknowledged by UNDP as a member of BCTA – Business Call to Action, which recognises and advances inclusive businesses with a global clear commitment to benefitting people in low and middle-income markets to help them achieve the Sustainable Development Goals.

Glossary

ВСТА	Business Call to Action
C&D	Construction & Demolition
CRM	Customer Relationship Management
EPR	Extended Producer Responsibility
GDP	Gross Domestic Product
IAN	Indian Angel Network
IIMB	Indian Institute of Management Bangalore
KSPCB	Karnataka State Pollution Control Board
MIS	Management Information Systems
MoEF	Ministry of Environment and Forests
MoHUA	Ministry of Housing & Urban Affairs
MRF	Material Recovery Facility
MSW (M&H) Rules	Municipal Solid Wastes (Management and Handling) Rules
RDWSD	Karnataka State Rural Drinking Water and Sanitation Department
SaaS	Software-as-a-Service
SBI	State Bank of India
SHG	Self Help Group
SZW	Saahas Zero Waste
TRF	Textile Recovery Facility
ULB	Urban Local Body
UNDP	United Nations Development Programme
ZWP	Zero Waste Programme

Page 32 <u>-</u>



Saahas Zero Waste's leadership at the Annual Planning Meeting 2023



Team at the Bangalore office





To download the book scan this QR code

Printed on 100% recycled paper at Maya Printers, JP Nagar, Bangalore.



C Phone: 1800 258 6676

Mail: info@saahaszerowaste.com

• Address:

#32, 5th B Cross, 16th Main Rd, MCHS Colony, Stage 2, BTM Layout, Bengaluru, Karnataka 560076

https://saahaszerowaste.com

© ♥ in ♥/Saahas Zero Waste

