Supported By:

WASTE WARRIORS
REDUCE RE-USE RECYCLE

Operations Team
Dehradun, Uttarakhand

Program Report
(April 2019 - March 2020)
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Founded in 2012, Waste Warriors is a registered society and solid waste management NGO. We work through a combination of direct action initiatives like area transformations and waste processing, awareness-raising and behavioral change programs, community engagement and development, and long-term collaborative partnership with various government bodies.

Our mission is to develop sustainable solid waste management systems by being a catalyst for community-based decentralized initiatives in rural, urban, and protected areas, and to pioneer replicable models of waste management, innovative practices in awareness and education, and to formalize and improve the informal livelihoods and stigmatized conditions of waste workers.

We are focused on empowering waste workers and supporting residential and business communities to adopt responsible and sustainable practices, which are directly linked to the United Nations Sustainable Development Goals (SDGs) 1, 8, 11, 13 and 15.

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**Our Mission**

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**Working Towards The UN SDGs**

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**No Poverty:** Our Green Workers are the backbone of our SWM efforts in Dehradun, and many worked in informal jobs before joining us. Our efforts have provided them a living wage, employee insurance, and other benefits.

**Decent Work & Economic Growth:** By providing safe and respectable working conditions we want everyone working with waste to get decent work and also receive livelihood training on SWM like we do for our Green Workers.

**Sustainable Cities and Communities:** Our Green Workers work with over a hundred establishments to collect and segregate waste, and we’ve worked to bring behavioural change to our clients to improve their source segregation.

**Climate Action:** Our efforts to prevent mixing of recyclable and organic waste, to promote composting of food/horticultural waste, and to prevent burning of any kind of waste directly reduces harmful greenhouse gases generated.

**Life On Land:** By cleaning lanes, promoting proper dustbin usage and maintenance, and ensuring timely waste collection and disposal, we are trying our best to ensure that life on land is not affected by Dehradun’s waste.
Dehradun, the capital and the most populous city of Uttarakhand, has always faced continuous challenges to improve its waste management system. To start with, there has not been a separate collection system for processing wet and dry waste. Lack of source segregation, composting, dry waste collection, and waste processing has led to large amounts of mixed waste, unsightly street litter, overflowing bins, choked drains, and a whole lot more.

Our Operations team started with only a handful of informal waste workers and has now grown to a strong team of nearly 50 Green Workers that are provided living wages, insurance, and training and safety equipment to take on such a daunting task of working in Dehradun. We are truly proud of all their hard work over the years to collect, segregate, transport, and trade waste, thereby saving hundreds of tons of recyclables from ending up in Dehradun's landfills and rivers.

With the help of Süd-Chemie, we have kept our waste collection, segregation, and trading operations up and running. This has helped us provide regular monthly wages and staff insurance to more than 50 Green Workers in Dehradun. We have a worker training plan in place that helps us implement and execute operational plans much more smoothly. Süd-Chemie's support has helped us build better working facilities compared to what we had previously, and helped us recover approximately 40 metric tonnes (MT) of recyclables from around 500 MT of segregated waste. These recyclables would otherwise have ended up in the city's landfills.
Our Goals

1. To manage SWM infrastructure that is strong, scalable, and financially sustainable.
2. To deliver waste management services with high standards for processing.
3. To develop efficient SWM systems that support the administration and communities.
4. To promote & maximize source segregation to minimize mixed waste going to landfills.
5. To provide formal livelihoods, training, and safe work conditions for all waste workers.
6. To build a skilled ground team that is dedicated to our environmental cause.

Our Strategies

1. By establishing waste management infrastructure for waste segregation, storage, and transportation, while increasing monthly collection, user-fees, and processing capacity.
2. By setting standards for training, work, health, and safety; by building an environment of respect and teamwork; by having strong communication with our service users.
3. By training staff and workers on our core values and upskilling them on supervisory and management skills so that they learn and benefit from our processing capacity.
4. By formally linking workers with formal systems like banking, EPF, ESIC, savings, health insurance, and govt. schemes to improve socio-economic conditions.
5. By coordinating waste collections from colonies, businesses, and schools and promoting best practices at all levels to be catalysts for social change in the field of waste management.
6. By training household families and children, colonies, shopkeepers, tourists, civil society organisations, and government officials on best waste management practices.
Our Team

**Avinash Pratap Singh, Chief Executive Officer**
Avinash has been involved with Waste Warriors and its mission in different capacities in the fields ranging from Project Management, Training, Consultancy, to Strategic Organizational Development. Today, through the guidance of his mentor, Jodie, Avinash is now the Chief Executive Officer and works on restructuring the project management to have better systems in place for data-driven decision-making and impact assessment.

**Aman Grover, Manager - Operations**
Aman joined Waste Warriors as Operations Manager and heads the direct action team in Dehradun. Aman considers himself a nature lover and admires how the simplest of things can be so beautiful and deeply respects our surroundings. He likes travelling, trekking, taking photos, interacting with people and discovering new places. His hobbies are music, gardening, travelling, photography, sports, and reading.

**Amritansh Singh, Associate Manager - Operations**
Amritansh joined the Waste Warriors family in August 2019 and took charge of the Sahastradhara project as the project manager. He looks after overall program implementation and government liaising. Amritansh has been working on solid waste management for the last four years. He is also the go-to person in our office for all composting related queries.

**Aslam Khan, Senior Operations Assistant**
Aslam is one of our youngest office team members and he joined Waste Warriors in September 2016. He is engaged in all kind of operations activities but his specialties are now with building relationships with scrap dealers to trade recyclable waste with them and channel it to our Swachhta Kendra near ISBT for further segregation and processing. Aslam is now really good at entering data and maintaining spreadsheets on his operations work.

**Ajeet Singh, Operations Assistant**
Ajeet joined our team in mid-2019 and is the only one at Waste Warriors whose parents also work at our organization. He is the proud son of two of our Green Workers, Seema and Sukhveer. Ajeet is in charge of supervising a team of Green Workers at our zero-waste tourist destination project at Sahastradhara waterfalls, and he works hard everyday to make sure that the area is clean and maintained.

**Siddharth Gurung, Operations Assistant**
Siddharth recently graduated with a Bachelors in Business Administration from Institute of Technology and Management. Born and brought up in Dehradun, Siddharth has a passion for music and instruments and also does vocals for a rock band which sings about social issues. He also love animals and nature, and plays football for local clubs, and participates in cyclothons and marathons every now and then.
Our Team - Green Workers

Amit Kumar Gagat (Truck Driver)
Ankit Kumar (Truck Driver)
Naresh (Truck Helper)
Sukhveer (Truck Helper)

Seema (Segregation Worker)
Seema Devi (Segregation Worker)
Vijendra (Segregation Worker)
Vipin (Parking Assistant)

Vinod (Green Worker)
Arjun (Green Worker)
Baley Ram (Green Worker)
Sanjog (Green Worker)
### Our Impact

<table>
<thead>
<tr>
<th>Metric</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Waste Processed</td>
<td>521 Tons</td>
</tr>
<tr>
<td>Recyclables Recovered</td>
<td>69.8 Tons</td>
</tr>
<tr>
<td>Multi-Layered Plastics Recovered</td>
<td>5.26 Tons</td>
</tr>
<tr>
<td>Dustbins Maintained</td>
<td>44</td>
</tr>
<tr>
<td>Waste Collected From Dustbins</td>
<td>30.4 Tons</td>
</tr>
<tr>
<td>Green Workers in Self-Help Group</td>
<td>12</td>
</tr>
<tr>
<td>Govt. Schools Served</td>
<td>16</td>
</tr>
<tr>
<td>Households Served</td>
<td>1749</td>
</tr>
<tr>
<td>Waste Collection Clients</td>
<td>53</td>
</tr>
<tr>
<td>Leaf Composting Enclosures</td>
<td>12</td>
</tr>
<tr>
<td>Dry Leaves Processed</td>
<td>6000 kgs</td>
</tr>
<tr>
<td>Compost Sieved</td>
<td>3500 kgs</td>
</tr>
</tbody>
</table>
Ground SWM operations active on need basis during the lockdown.

Monthly meeting with our Green Workers.

Trading dry recyclable waste at our center.

Face masks for health and safety.

Maintaining Gandhi Park leaf enclosures.

Shredded MLP to be used by PWD for roads.

Green Workers getting ID cards at a SHG meeting.

Waste segregation at our Aman Vihar center.

Trading dry recyclable waste at our center.

Face masks for health and safety.

Maintaining Gandhi Park leaf enclosures.

Shredded MLP to be used by PWD for roads.

Green Workers getting ID cards at a SHG meeting.

Waste segregation at our Aman Vihar center.
Empowering Our Team

Seema and her husband Sukhveer joined Waste Warriors last year in 2019. While she joined as a segregation helper, Sukhveer joined as an assistant to our daily waste collection team. Her son Ajeet also joined as an operations supervisor for our Sahastradhara team supported by Make My Trip.

2019 was a year of new experiences for Seema as she travelled in an airplane to attend her first ever conference in Delhi. The event was the UN Convention to Combat Desertification, and Seema and our CEO Avinash were invited by the UNDP India team.

She and many other Safai Saathis were also part of a panel discussion hosted by UNDP at the convention. Seema is strong example of the upliftment and social change that women waste workers deserve. We are proud of her dedication and commitment to our cause.

Our Green Workers were guided and supported to form their first self-help group, Uday Swayam Sahayata Samooh. It was formed to empower them and give financial independence to all SHG members, where each member contributes Rs.100 towards the SHG bank account. The money saved is used to help each other.

Recently, they learnt how important this could be: the SHG gave a loan at a very low interest rate to one Green Worker who was in need.

Aslam joined Waste Warriors as an Admin assistant in October 2016. He was later moved to Operations to assist the team in daily tasks. Soon he became our dry leaves composting expert.

In July 2019, Aslam was promoted to Senior Operations Assistant and he currently takes care of all the trading-related activities in our UNDP-supported PRITHVI plastic waste management program. He has built a vast network of waste pickers and scrap dealers that he has connected with and stays in touch.

Aslam is also studying and will soon complete his 3rd year of Science at IGNOU. We’re really proud of his hard work, dedication, positivity, and goodwill!
We have supported our Outreach team who have raised awareness amongst communities and RWAs on the importance of minimizing the generation of mixed waste, of improving waste segregation at source, and of being aware of the negative health and environmental effects of mismanaged waste.

Many communities now segregate wet and dry waste into separate bags which are now collected by a Dehradun Nagar Nigam vehicle. Some of the waste collected by Nagar Nigam is then brought to our facility for secondary segregation.

Last fiscal year we sent approximately 5,261 kgs of multi-layered plastic packaging to Uttarakhand Public Works Dept, which was then shredded and used in their road-making process.

Segregating mixed waste has always been a challenge for our segregation workers at our Aman Vihar center. However, even with the challenges faced, our segregation workers have always tried their best to save waste from going to landfills by going through every last kilo in every bag of waste.

To put things in perspective, approximately 69.8 Metric Tonnes of recyclables were recovered and segregated into 15+ waste categories before being sent for recycling. Furthermore, over 500 MT of total waste was sent to the Dehradun municipal facility for composting and further segregation.
1. **Health Insurance & Claims:** To ensure only the minimum amount of waste reaches the landfill, our Green Workers work tirelessly to collect, segregate, and transport waste. This, however, exposes them to the hazards of working with waste. Even though they are covered under ESIC, medi-claim is one of the pain points that our workers face regularly.

2. **Limited Covered Storage:** Our facility is equipped with a shed where our Green Workers segregate dry and wet waste. However, due to its very limited area of cover, the recyclables do get wet during a downpour, making it difficult to manage and get the best resale value for such recovered materials.

3. **Segregation Center Infrastructure:** Although covered, our rented facility has an uncemented floor which causes issues like rat infestation which translates to torn dispatch bags and hygiene issue for our workers. Our workers also find it challenging to ensure and maintain the quality of our segregated recyclable waste during a downpour. Covered sections also need to be made to store dry segregated waste in a more organized manner, which will make the additional uncovered space for usable and efficient.

4. **Fire Safety System:** With our waste management operations work scaling up, it is imperative for us to ensure our Green Workers work in a safe facility. We have placed fire extinguishers at our facility for their safety and have trained them on how to use them. However, since the materials are easily flammable, it is important for us to also have a proper fire extinguishing system in place.
New Developments

Sahastradhara - Reaching Zero Waste

Sahastradhara is among Dehradun's most popular tourist destinations. Our goal for the area is to transform it into a zero-waste tourist destination with the support of our operations team. We are currently working on implementing SWM services, public awareness-raising and community engagement programs with the aim of changing the way people live and work here. We want to inculcate the importance of keeping these waterfalls and river clean and free from litter and waste.

Operations Support For Our UNDP Team

Our Operations team, with the support of Süd-Chemie, has been able to help the Waste Warriors UNDP implementation team with their waste management logistics. We have also been able to provide real time assistance in bulk-buying of recyclables and coordinating activities with waste pickers and scrap dealers. All plastic that is recovered at our segregation facility is taken to the Waste Warriors Swachata Kendra, which is Uttarakhand’s first material recovery facility dedicated to processing plastic waste. Here our recyclables are further processed by baling and shredding machines before transportation to further aggregators and end recyclers.

Health, Hygiene, & Safety for Our Green Workers

Our Green Workers deal with tons of mixed and domestic hazardous waste on a daily basis. Keeping their health and well-being in mind, we installed a new water connection along with a 500-liter water tank in our Aman Vihar segregation facility. The facility now also has a revamped washroom and clean area for our workers.

In addition, we have also installed CCTV cameras to help prevent theft of things like metal. The four cameras also help in monitoring the safety and productivity of our workers.
COVID-19: Prevention Measures

Measures Taken Prior To The Lockdown:

- Conducted a session with our Green Workers to raise awareness about Covid-19.
- Provided tips on identifying fake news and information.
- Provided soap and sanitizers and taught them the proper technique of washing hands.
- Provided safety masks and gloves.
- Advised against handshakes and touching their faces without washing hands.

Measures Taken During The Lockdown:

- To keep our Green Workers safe from the transmission of Covid-19, all activities were suspended and they were asked to stay home during this lockdown.
- To help them through this nation-wide lockdown, there will be no deductions in salary.
- Daily updates from the Ministry of Health and WHO are being shared with all Green Workers.
- We’ve distributed dry food rations to all Green Workers given the urgent need to stay at home.

COVID-19: Relief Efforts

When India’s nationwide lockdown began due to the COVID-19 pandemic, our Operations and Outreach teams kick-started our relief efforts for waste workers and those who had lost their daily wages.

With permission from Dehradun’s District Magistrate to conduct relief work in the city, we packed 17+ tons of food rations into relief kits, and distributed 1,300+ relief kits to waste workers and those in need, supporting 4,500+ people in Dehradun. We’ve been conducting our relief work in the presence of the Dehradun Police Dept. and we’re grateful for their support across the city.

Waste workers and those in need are also being provided with direct cash relief, as people do need a bit more than just food to provide for their families. We have so far disbursed direct deposits of Rs.5,000 each to 200+ people whose accounts have been verified.

Our dedicated relief teams are also using digital tools to document all our efforts and maintain transparency through the entire process.
Our entire operations team, including our Green Workers, considers ourselves as catalysts for social and environmental change and we are proud to have had Süd-Chemie’s support as an our enabler over the years.

We know from experience that waste management may not necessarily be a sustainable business, especially while we were a small organization in a booming urban capital city. But over the past two years, we have had Süd-Chemie to thank for helping us scale up in Dehradun by doubling our team strength, improving our waste management infrastructure, and building strong relationships with communities across the city and with municipal stakeholders. Most importantly, with this kind support, we have been able to provide better working conditions and benefits to our Green Workers, whose efforts are truly commendable.

When we consider the positive environmental and social aspects of effective waste management, despite the financial hardships and challenges of dealing with waste, it genuinely motivates us to pursue our vision of a cleaner India even harder. On behalf of the entire Operations team in Dehradun, we take this opportunity to thank you for helping us reach that vision.

Aman Grover
Operations Manager