



Inclusive Markets

Project Profiles

of efforts to tackle plastic pollution while improving livelihoods and supporting marginalized populations in South and Southeast Asia

Contents

3 Leakage & Livelihoods

- 4 EcoSattva (Alibag)
- 6 EcoSattva (Chendhare)
- 8 EcoSattva (Aurangabad)
- 10 Saahas Zero Waste
- 12 ReForm Plastic (Hoi An)
- 14 ReForm Plastic (Da Nang)
- 16 Hasiru Dala Innovations (I)
- 18 Hasiru Dala Innovations (II)
- 20 Indonesia Solid Waste Association
- 22 BINTARI Foundation
- 24 Reciki
- 26 Blue Ocean Plastic Recycling
- 28 Pure Oceans

30 Equality in Plastics Circularity

- 31 GreenHub
- 33 EcoSattva
- 35 The Philippine Reef and Rainforest Conservation Foundation, Inc. (PRRCFI)
- 37 Chintan
- 39 The Centre for Social Research and Development (CSR)
- 41 Pure Oceans
- 43 Kashtakari Panchayat
- 45 WWF-Philippines

[View the profiles >](#)

[View the full report >](#)



Leakage & Livelihoods

[View program >](#)



EcoSattva (Alibag)



September 2021 - March 2022



Alibag, India



carpeindia.org

EcoSattva Environmental Solutions is a women-led social enterprise in India that provides services in solid waste management (SWM), green cover management and water body restoration.

Project context

EcoSattva works with both urban and rural local government bodies to transform their solid waste management systems. They do this by implementing a proprietary six-step process called BOTRAM (Baseline, Onboarding, Training, Resource recovery, Awareness Campaigns, and Monitoring), which improves the efficacy and conditions for formal waste workers as well as the engagement and integration of informal waste pickers. BOTRAM has been implemented in more than 14 cities, towns and villages in India, Argentina and Indonesia. EcoSattva has developed a web-based application to house the entire BOTRAM process and develop data-driven insights.

Project description

With The Incubation Network's support, EcoSattva transformed solid waste management in the coastal city of Alibag by implementing their BOTRAM process. Unique to this BOTRAM implementation, EcoSattva

piloted their web-based application and tested a training process with local sanitation supervisors and workers. The goal was to ultimately transfer the process to the local government, thereby enhancing the sustainability and replicability of the BOTRAM model.

Upon conducting their baseline assessment, EcoSattva found that there was virtually no segregation of the waste being collected in Alibag. In response, EcoSattva conducted trainings with the sanitation team, and awareness-raising campaigns with residents and businesses. One of their most essential and effective interventions was installing a partition in the collection vehicles, allowing for the separation of dry and wet waste for treatment. Following EcoSattva's project implementation, more than 80% of waste was being segregated at source, and the 16 collection staff were trading enough recyclable material to increase their individual incomes by Rs. 2000/month.

Key to the success of the BOTRAM process is a strong partnership with the government, allowing for the execution of a common vision. This project sought to build on the usual BOTRAM implementation process by equipping government workers with EcoSattva's new web-based application for managing the BOTRAM process and monitoring data. This new technology was introduced via a digital staff competition, the 'Swachata Premier League'. While the process in Alibag allowed

EcoSattva to develop more modalities in the app and pilot the gamified training, it also led the project team to conclude that it would take more time and effort for the government to be able to independently manage the digitized data collection and reporting.

In keeping with the themes of the 'Leakage and Livelihoods' program, EcoSattva planned to integrate the 14 local informal waste pickers into Alibag's newly optimized municipal solid waste management system, specifically the operations of a new Material Recovery Facility (MRF). However, construction of the MRF was significantly delayed by the pandemic and other factors. Regardless, during the project timeframe EcoSattva was able to formalize the work of four informal waste collectors, who each received an income of Rs. 5000/month, personal protective equipment, and access to government benefits. Now that the MRF is open, they will continue to integrate informal workers into the facility and improve their livelihoods and working conditions.

In recognition of their efforts and success, EcoSattva has received formal letters from city and district officials, acknowledging the high quality of EcoSattva's service delivery and stating an intention to expand the work to other cities, towns, and villages.

“We have made a lot of progress... the city of Alibag recognizes workers like us, because of this project. The EcoSattva team has taught us good habits, the importance of time, and how to deal with people. Thank you very much to the EcoSattva team and Alibag Municipal Council from all the workers and our families.

Santosh Jadhav, waste collection vehicle driver and winner of Swachata Premier League.

Program Impact

79 No. of waste workers reached
↳ **54** of which are women

100% % of waste workers with improved livelihoods
↳ **100%** of which are women

83% % of waste workers with improved access to work support and benefits
↳ **78%** of which are women



20,000 households reached

57 MT of plastics collected per month



Increased involvement in decision-making processes around WMR systems



Government stakeholders with increased awareness of gender-sensitive WMR





EcoSattva (Chendhare)



July - December 2022



Chendhare, India

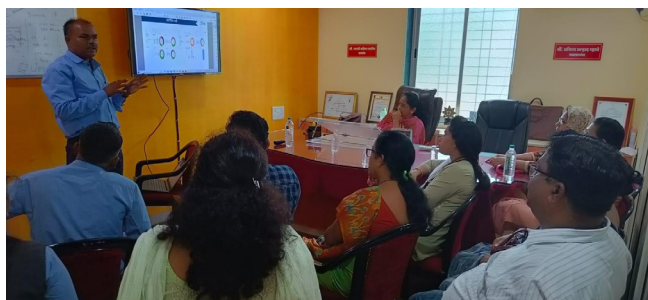


carpeindia.org

EcoSattva Environmental Solutions is a women-led social enterprise in India that provides services in solid waste management (SWM), green cover management and water body restoration.

Project context

Chendhare is a town adjacent to Alibag, where EcoSattva conducted their first 'Leakage and Livelihoods' project by implementing their proprietary six-step BOTRAM process (Baseline, Onboarding, Training, Resource recovery, Awareness Campaigns, and Monitoring) and piloting their app for waste workers. After witnessing the positive impact of the process in Alibag, and given that Chendhare's waste was entirely unsegregated and sometimes dumped within Alibag, the local government engaged EcoSattva and The Incubation Network's support in implementing the BOTRAM process in Chendhare as well. This was an opportunity for EcoSattva to iterate the model based on the lessons learned during the Alibag implementation, especially with regards to the methods they use to introduce and gamify their new web-based monitoring app for government workers. EcoSattva also piloted an extension into organic waste management.



Project description

Over the course of six months, the EcoSattva team was able to implement the BOTRAM process in record time, thanks to the strong partnerships that they formed with the municipal sanitation staff and elected representatives in Chendhare, and despite the doorstep collection contractor changing partway through the project. EcoSattva's efforts resulted in 98% source segregation of waste, the elimination of 14 dumping areas, and the creation of a community of 76 home composting enthusiasts. The segregation of waste and source, and other interventions, mean that not only have the working conditions for waste collectors dramatically improved, but they are also able to fetch better prices for dry waste that is cleaner and in better condition than when it is picked from mixed waste.

Increasingly, EcoSattva is introducing digital technologies to the people they work with, with waste collectors now using WhatsApp to report non-compliance with the new source segregation methods.

“We used to go around and pick up the dry waste but dogs barked and sometimes bit us, and people shouted at us to not pick the dry waste. EcoSattva has given us a structured method for collecting dry waste, and now the recyclables, organic scraps, and garbage are kept separately. That's why we are getting very good prices for this waste.”

Mrs. Shakuntala Gajanan Vatkar (waste picker).



Program Impact

12 No. of waste workers reached
↳ **3** of which are women

100% % of waste workers with improved livelihoods
↳ **100%** of which are women

100% % of waste workers with improved access to work support and benefits
↳ **100%** of which are women

5,208
households reached

0.6 MT
of plastics collected per month



Increased involvement in decision-making processes around WMR systems



Government stakeholders with increased awareness of gender-sensitive WMR





EcoSattva (Aurangabad)



October 2022 - December 2022



Aurangabad, India



carpeindia.org

EcoSattva is a women-led business that provides services in solid waste management, green cover management, and waste water management in multiple locations in India.

Project context

EcoSattva collaborated with Hasiru Dala Innovations to construct a new Material Recovery Facility (MRF) in Aurangabad, which was destroyed by a massive fire in June 2022. While the cause of fire is unknown, the extent of the damage was due to a lack of fire safety measurements, and the overcapacity of the materials at the MRF, which allowed the fire to spread faster. Textile waste is the dominant material that remains stored at such MRFs, as there are rarely formal forward linkages available, especially for post-consumer waste.

Project description

With support from The Incubation Network, this short-term project focused on two aspects at another of EcoSattva's MRFs, in Harsul, Aurangabad: increasing the recovery rates for textile waste, and enhancing fire safety measurements.

EcoSattva first conducted research and interviewed ecosystem players in the textile recycling industry, both at local and national levels. However, they mostly worked with pre-consumer and homogenous textile waste sources, and not with mixed textile waste. The only available option was to burn mixed cloth waste in informal brick kilns, which is environmentally unviable. Therefore, EcoSattva established connections with industry stakeholders and is exploring post-consumer waste solutions.

To further develop the fire safety measurements, EcoSattva had two service providers conduct a formal assessment of the fire safety at the MRF. They have started implementing some of the recommended fire safety measures, such as installing a transformer for a safer and more consistent power supply. This allowed them to share concrete recommendations with their partnering bodies in other cities, who are developing their own new MRFs.

The recovery mechanism at the Aurangabad MRF was also upgraded with the introduction of a conveyor belt system. Once the staff were familiarized with it, this resulted in higher recovery rates at the facility.

“The focus on cloth and textile waste should be on the reduction of it. Even in India, which has a large hand-me-down culture, we are still generating more than we can handle. Mattresses and pillows are also found under the ‘textile’ category of waste and are a completely different challenge. In general, there is a lack of established models for fire safety at MRFs. This could be an entrepreneurship opportunity in sectors allied with plastic recycling, i.e. providing services to design the MRFs, provide fire equipment and design systems, etc.

- EcoSattva



Program Impact

12 No. of waste workers reached
↳ **10** of which are women

100% % of waste workers with improved livelihoods
↳ **100%** of which are women

33,067 households reached

100% % of waste workers with improved access to work support and benefits
↳ **100%** of which are women

✔ Increased involvement in decision-making processes around WMR systems

✔ Government stakeholders with increased awareness of gender-sensitive WMR





Saahas Zero Waste



March 2021 - December 2022
(in two phases)



Badagabettu, India



saahaszerowaste.com

Saahas Zero Waste is an environmental and social enterprise with more than 20 years of experience working on waste management, resource recovery and social impact in India.

Project context

While there have been initiatives by the Indian government to integrate the informal sector into the formal waste value chain, they have mostly been limited to providing basic infrastructure and recognition. To supplement these efforts, Saahas Zero Waste's social inclusion program aims to leverage the innate entrepreneurial skills of informal waste workers, and transition their activity into formalized, responsible businesses that serve their communities. In practice, Saahas Zero Waste's social inclusion model is being developed and validated by pilot projects at the micro-entrepreneur, aggregator and MRF levels.

Project description

The Incubation Network supported a pilot project at the aggregator level, which focused on a dry waste collection center in the rural village of Badagabettu in the Udupi district of Karnataka state, India. The project followed Saahas Zero Waste's process of selecting local entrepreneurs as leaders, conducting a baseline survey,

providing one-time infrastructure support, engaging in capacity building and business development activities, and monitoring and reporting on progress.

Since 2019, Badagabettu Gram Panchayat has had basic civil infrastructure for the collection and processing of dry waste. The local collection center is managed by a Self-Help Group (SHG), a group that receives government assistance to take up income-generating activities; this SHG is, made up mostly of migrant workers. Together, they manage door-to-door collection, sorting and pre-processing of waste, and user fee collection. However, due to a lack of processing machinery and vertical integration, collection center operations were not viable, and could not scale up in order to maximize the processing capacity of the facility. After a baseline study by Saahas Zero Waste, interventions were designed to improve processing capacity and operational compliance, and implemented within phase one of this project. As a result, within the first year the facility experienced a 65% overall increase in dry waste processing capacity, and full compliance with labor, occupational health and safety, and environmental regulations.

On completion of phase one of the project, Saahas Zero Waste determined that further support, capacity building, and infrastructure development were needed

for the facility to reach 100% operational capacity, and for it to become a self-sustaining business model. It was also observed that about 10% of the negative value waste collected was textile waste, for which the SHG had no available treatment or end markets. Therefore, the second phase of The Incubation Network's support included the addition of a textile waste management system within the same facility to collect, sort, and pre-process textile waste and identify end markets for the waste. The SHG also focused on optimizing the collection process, to ensure that more of the waste is segregated properly, and introduced digital technologies to improve collection coverage, traceability, transparency, and business decision-making.

To create systemic change at a community level, and for the new textile waste infrastructure to be a success, Saahas Zero Waste worked with the SHG to conduct a two-month long awareness campaign with the community, reaching 2,540 private residences and dry waste collection centers. They also conducted 14 training sessions with the SHG and their own field staff on responsible textile waste management practices, including waste handling and sorting, data capturing, and disposal and collection practices. Saahas Zero Waste also facilitated new partnerships with recyclers and secondhand markets. As a result, the recovery of unsoiled textile waste increased by an average of 200 kg/month, and 10 new jobs were created to upcycle textile waste.

“For me, this job means I’m able to create employment for the locals and at the same time avoid dumping waste into landfill. A lot of problems were faced to run this facility through the Self Help Group. Some members of the gram panchayat [rural government body] mentioned that women cannot handle this waste work. But we have managed this facility so far, and proved those members incorrect. We started the operation with six people and now I’m managing a workforce of 23.

Sridevi, Project Leader/Supervisor of Ghana Drava Sampanapula, the Self-Help Group operating the Badagabettu dry waste collection center.



Program Impact

20 No. of waste workers reached
↳ **9** of which are women

62% % of waste workers with improved livelihoods
↳ **75%** of which are women

62% % of waste workers with improved access to work support and benefits
↳ **75%** of which are women

2,550 households reached

8 MT of plastics collected per month

- ✓ Increased involvement in decision-making processes around WMR systems
- ✓ Improved capacity to support waste worker integration
- ✓ Government stakeholders with increased awareness of gender-sensitive WMR





ReForm Plastic (Hoi An)



August 2021 - March 2022



Hoi An, Vietnam



reformplastic.com

ReForm Plastic, a social enterprise, operates a decentralized franchise model of facilities that process low-value plastics into sheets, boards, furniture and other products using a compression molding process and other technologies. More broadly, ReForm Plastic sets out to tackle unsolved challenges in the solid waste management value chain in Vietnam and beyond, including the integration of the informal recycling sector.

Project context

Previously, ReForm Plastic successfully piloted an integrated micro-Material Recovery Facility (MRF) model in Hoi An, Vietnam, which offered voluntary source separation options for households and businesses and provided an organized, central source of tradeable waste for informal waste workers (IWWs), who were the caretakers of the facility. The initiative also established a source of feedstock for ReForm Plastic, who use the low-value waste for their own manufacturing. Additionally, ReForm Plastic set up several collection points in a number of international schools and private schools around the city.

Project description

With support from The Incubation Network, ReForm Plastic set out to study further the feasibility of voluntary recovery points that are run by IWWs (who are almost exclusively women in Vietnam), and create a dataset that would encourage other cities to adopt the same models. Through this Leakage and Livelihoods project, ReForm Plastic established four new recovery points (the micro-MRFs) in Hoi An, which were supported by local authorities and operated by women IWWs. While the complementary school collection model was hampered by the Covid-19 pandemic and therefore rolled out more gradually, ReForm Plastic did create successful engagements with local businesses for the collection of bulk waste.

The four micro-MRFs were established as temporary structures on government land, strategically located near markets, schools, or residences. They have a public-facing frontage where residents or businesses can place their clean dry waste through slots in the wall into segregated bins that are stored inside the structure, which is a chain-link shed with a roof. Women IWWs manage each facility, keeping the area clean, holding the keys and further sorting material within the shed space. The IWWs also helped, alongside the local government and ReForm Plastic, to distribute pamphlets and educate the surrounding households and businesses on how

to segregate and submit their waste. The micro-MRFs are connected to a local aggregator, who collects the tradeable, high-value materials while also transporting the non-tradable plastic to ReForm Plastic for a small fee. The municipality handles any hazardous material. ReForm Plastic went on to work with Women's Union to jointly develop a hub and spoke model of 54 smaller collection points operated by the Women's Union and their recruited IWWs.



The woman involved in operating the micro-MRF that was situated at a local wet market was reluctant, at first, to collect and trade the low-value plastic. ReForm Plastic spent several days with her and the local authorities, supported by the Youth Union, distributing flyers to all market vendors and requesting their help with waste segregation. The waste collector started to gain trust, and she now regularly trades with ReForm Plastic.

- ReForm Plastic



Program Impact

10 No. of waste workers reached
↳ **10** of which are women

80% % of waste workers with improved livelihoods
↳ **80%** of which are women

80% % of waste workers with improved access to work support and benefits
↳ **80%** of which are women

1,000 households reached

+0.5 MT of plastics collected per month

- ✓ Increased involvement in decision-making processes around WMR systems
- ✓ Improved capacity to support waste worker integration
- ✓ Government stakeholders with increased awareness of gender-sensitive WMR



Cảm ơn các anh chị, những người đã giúp cho thành phố giảm rác và thu gom lại lượng lớn phế liệu thay vì bị thải bỏ, chôn



ReForm Plastic (Da Nang)



October 2022 - December 2022



Da Nang, Vietnam



reformplastic.com

ReForm Plastic, a social enterprise, operates a decentralized franchise model of facilities that process low-value plastics into sheets, boards, furniture and other products using a compression molding process and other technologies. More broadly, ReForm Plastic sets out to tackle unsolved challenges in the solid waste management value chain in Vietnam and beyond, including the integration of the informal recycling sector.

Project context

Waste picking is an integral part of the waste management system in central Vietnam, and it is typically performed independently and informally. Other actors in the space, including those who rely on reclaimed waste as feedstock, are therefore typically unable to communicate with, coordinate, and help to support informal waste workers (IWWs) as a group.

Project description

ReForm Plastic employs and trades with local IWWs, and has observed an unmet need to provide this vulnerable population with support services,

recognition, and a platform for their voice. With support from The Incubation Network, ReForm Plastic has established a membership network for IWWs. Their goal was to recognize the efforts of collectors, share multidimensional perspectives of the informal waste sector to help to destigmatize their work, and work to integrate IWWs into a collection program with local businesses.

“The Collector Network” was established on various channels, including Mighty Networks, Facebook page, and Zalo—a Vietnam messaging application. This was done to ensure the IWWs had multiple opportunities to reach the support services within the network, and to overcome any digital access and literacy challenges. ReForm Plastic created a list of membership benefits, launch material, and community guidelines. Within the first two months the network already had 302 members, 95% of whom were women, as well as a database of 57 collection centers.

As the platform aimed to provide useful resources to its members, ReForm Plastic prioritized the most-requested resources from the members and conducted in-depth research to develop resource documents on particular topics of interest. Then, the resources were shared through the channels. The resources included lists of free or cheap accommodation for members who

do not have access to permanent housing, information on food bank locations, steps to local registrations appropriate to migrant workers, and updates on regulations relevant to the members.

In addition, ReForm Plastic held in-person events for the purpose of launching the network, distributing membership cards (which were, in some cases, the first piece of photo identification the IWWs had ever owned) and PPE, sharing information, and providing training. The flagship event provided in-depth health and safety training, and collaborated with the Danang Youth Union to provide free health checkups at local hospitals for the network members. Such events are also used as an opportunity to gather interviews and other content for social media campaigns to bring community awareness to their work, and to facilitate discussions with other waste system actors and funding partners who are now enabling the continuity of this project.



“We learned by talking to the informal waste workers that many began their careers in this field not just as a way to make a livelihood, but also out of love and enthusiasm for what they do. Generally speaking, they always wish to keep working as collectors and believe that they will do so until they are physically unable to continue.

- ReForm Plastic



Program Impact

302 No. of waste workers reached
↳ **287** of which are women

250 households reached

Project outputs

- ✓ Increased involvement in decision-making processes around WMR systems
- ✓ Improved capacity to support waste worker integration
- ✓ Government stakeholders with increased awareness of gender-sensitive WMR



Hasiru Dala Innovations (I)

 August 2021 - May 2022

 Bangalore, India

 hasirudalainnovations.com

Hasiru Dala Innovations (HDI) is a for-purpose company based in Bangalore, India, that is focused on creating better livelihoods and entrepreneurship opportunities for waste pickers through inclusive and innovative business models that enable the circular economy.

Project context

Waste pickers generally work in open spaces outside urban areas, where they informally rent pieces of land to work and live in. They have no stable structures to protect themselves and their products, which poses as a challenge during the rainy season when valuable waste gets destroyed, resulting in financial loss, and living conditions cause disease to spread. In addition, waste pickers experience major and constant threats from local authorities who harass them for bribes in exchange for safety and security. HDI works to legitimize and professionalize the work of waste picker entrepreneurs, so that their independent businesses can thrive.

Project description

The project was initiated to create an overall better, safer, and more efficient working environment for waste pickers, through the establishment of a shared Material Recovery Facility (MRF) for two waste picker entrepreneurs that have long been supported by HDI. With support from The Incubation Network, HDI constructed a large shed on the outskirts of Bangalore to separate the working and living spaces of the waste entrepreneurs and their teams, and to provide a stable structure to work under to protect them from the weather. The MRF space was split and shared between the two waste picker entrepreneurs, which proved cost-effective as they were able to share basic amenities and equipment while running their businesses independently.

The MRF was equipped with a professional setup to keep up with ongoing demand, increase the quality of materials, and to ensure the health and safety of the workers. HDI installed a baling machine and established necessary electrical connections, which required building productive relationships with the relevant government departments. The shared baling machine allows for the space to be utilized more efficiently, and for the waste entrepreneurs to get better rates for waste in the market.

Alongside the infrastructure development, HDI also provided the waste worker community with necessary training to professionalize them and nurture their entrepreneurial spirit. They were also taught how to understand and report on waste data in order to enhance the transparency and traceability of their waste management businesses. HDI supported this process by employing a supervisor and staff for bookkeeping and data management.

“We were surprised by how waste pickers in this project were happy to accept data collection and reporting requirements as long as the necessary support is provided to them. Of course, they would need to see the supporting organization as trustworthy and look forward to investments that benefit them to meet their basic needs.”

- Hasiru Dala Innovations



Program Impact

47 No. of waste workers reached
↳ **12** of which are women

100% % of waste workers with improved livelihoods
↳ **100%** of which are women

92% % of waste workers with improved access to work support and benefits
↳ **100%** of which are women

6,877 households reached

+3.5 MT of plastics collected per month

- ✓ Increased involvement in decision-making processes around WMR systems
- ✓ Improved capacity to support waste worker integration
- ✓ Government stakeholders with increased awareness of gender-sensitive WMR





Hasiru Dala Innovations (II)



October 2022 - December 2022



Bangalore, India



hasirudalainnovations.com

Hasiru Dala Innovations (HDI) is a for-purpose company based in Bangalore, India, that is focused on creating better livelihoods and entrepreneurship opportunities for waste pickers through inclusive and innovative business models that enable the circular economy.

Project context

Waste material and facilities, from informal waste picker storage areas to large Material Recovery Facilities (MRFs), are at risk of damage and destruction by fire. This can be caused by a lack of fire-fighting equipment, training, proper material storage, or in some cases, arson. In 2022, a brand-new MRF, built through a collaboration between HDI and EcoSattva in Aurangabad, was completely destroyed by fire.

Project description

This short-term project, supported by The Incubation Network, aimed to improve the fire and safety standards at HDI sites in Bangalore through training and equipment installations in the staff's local languages. They first consulted with professionals to determine the most effective approach.

The newly installed equipment included smoke detectors and alarms, fire extinguishers, first aid boxes, signage, enhancement of CCTV coverage and mobile phone access to the CCTV, and additional lighting for better security at night. The staff also agreed on an Emergency Evacuation Plan and put up the details. In addition, HDI conducted fire safety and first aid training for their staff. The security personnel were hired to surveil the MRF compound in addition to CCTV coverage.

“The workers were enthused by our attention and investment towards fire prevention and safety. They also participated actively and wholeheartedly in providing solutions, upon seeing all the action from our end. This project acted as a great motivator for the team.

- Hasiru Dala Innovations

Program Impact

28 No. of waste workers reached
↳ **5** of which are women

94% % of waste workers with improved livelihoods
↳ **100%** of which are women

56% % of waste workers with improved access to work support and benefits
↳ **25%** of which are women

28 households reached

- ✓ Increased involvement in decision-making processes around WMR systems
- ✓ Improved capacity to support waste worker integration
- ✓ Government stakeholders with increased awareness of gender-sensitive WMR





Indonesia Solid Waste Association



October 2021 - July 2022



Banyuwangi, Indonesia



inswa.or.id

The Indonesia Solid Waste Association (InSWA) is a membership association of solid waste management professionals and stakeholders, with a goal to promote integrated sustainable waste management and the transition to a circular economy.

Project context

InSWA is the implementing partner for the Clean Oceans through Clean Communities (CLOCC) project, working in partnership with 17 villages in the Banyuwangi Regency in eastern Java to co-create solutions to address marine plastic pollution.

Project description

With support from the Incubation Network, InSWA conducted action research to identify Itinerant Waste Buyers (IWB) who are working as family businesses, understand their constraints, design small interventions to enhance their business models, and increase their business security.

First, InSWA conducted participatory fieldwork with informal collectors to confirm how IWBs and their families engage in informal recycling. They conducted

interviews with 13 recycling family micro-entrepreneurs, and selected 10 to work with closely. They found that limited storage and inefficient transport were the key constraints to the recovery of plastics, and therefore the economic viability of the family businesses. InSWA also explored the gendered roles present within the family units, from the separation of labor between men and women, to men's dominance in relation to trading transactions and financial management.

The InSWA team noticed that business literacy, basic bookkeeping skills, and digital literacy among the IWBs were low, and conducted capacity building activities in these areas. The team then provided each IWB who joined the program with a smartphone to increase their ability to keep track of their own volumes and sales, as well as to communicate with the InSWA team. They also provided the IWBs with a set of scales, for them to be able to weigh their materials before sale, keep records of what they sell and what it brings them, and to make more strategic choices about storage, transport, and marketing. Further individualized support was offered to be responsive to the unique needs of each family business.

“The trust between Itinerant Waste Buyers (IWBs) was very low during the first visits. Most of the IWBs have never had any opportunity to know each other—and even though they do their collecting in different villages and rarely overlap, there was significant distrust and fear of competition and even stealing. (...) We provided an opportunity and a physical space where the IWBs could meet, share, and discuss their experiences with each other. Also, the process of developing individual support packages helped with building trust, because it meant that the families had an experience of being able to think about what they need and want, without considering whether this was more, less, or different from the support packages of others.

- InSWA



Program Impact

28 No. of waste workers reached
↳ **12** of which are women

100% % of waste workers with improved livelihoods
↳ **100%** of which are women

94% % of waste workers with improved access to work support and benefits
↳ **88%** of which are women

25 households reached

+0.9 MT of plastics collected per month

- ✓ Increased involvement in decision-making processes around WMR systems
- ✓ Improved capacity to support waste worker integration
- ✓ Government stakeholders with increased awareness of gender-sensitive WMR





BINTARI Foundation



August 2021 - May 2022



Semarang, Indonesia



facebook.com/bintari.org

The Bina Karta Lestari (BINTARI) Foundation is a nonprofit organization focused on environmental management and sustainable development, including community education and solid waste management.

Project context

BINTARI works with the Semarang City Government to improve waste collection and sorting. One of their major initiatives has been to create a recyclable materials marketplace using a mobile app, developed to facilitate transactions for the collecting, donating, buying or selling of waste and other used goods. The intention was to help waste pickers and aggregators enhance their service coverage and their livelihoods, encourage the community to sort and collect more recyclable materials, and generally make the market more transparent.

Project description

With support from The Incubation Network, BINTARI integrated informal waste pickers into the design and testing of their app, which they called Ambilin. The app itself was created through a participatory design process that included waste pickers with motorbikes

(“motorized waste pickers”), who were the main project stakeholders), waste banks, temporary disposal site management, waste aggregators, and households.

Key to the success of the project was for BINTARI to enable the local waste pickers, who are mostly informal migrant workers, to become professional collection service providers on the Ambilin app. To this end, BINTARI partnered with local police so that the collectors could be properly trained, and acquire legal driver’s licenses over time. They also provided their 49 motorized waste collector partners with additional training, uniforms, ID cards, and insurance. This gave the waste collectors a sense of confidence, reduced incidents of public harassment, and enabled them safe entry to public and private spaces, from which they were previously prohibited, in order to access high-value waste material. The legitimization efforts, coupled with BINTARI’s public awareness campaigns, opened the door for some of the waste collectors to formalize themselves further, and access bank accounts and other financial services.

While the Ambilin app remains in the early stages of adoption, BINTARI used the project as an opportunity to build trust among a community that has previously worked in isolation from one another, and this has already had lasting positive effects. BINTARI’s project

facilitators dedicated significant time and effort to meeting the waste pickers and establishing shared trust, and ultimately were able to establish an association and bring the independent workers together in community. The collectors now communicate regularly via WhatsApp, giving them unprecedented access to pricing and other market information, and they are better equipped to advocate for their needs.



Mr. Bakhrun (44 years) has been working to collect and buy recycled materials for four years. He started his waste trading business by using a motorbike to find customers who sell their recycled materials. He needed financial capital to improve his business, but it was difficult for him to convince the bank. After joining Ambilin, Mr. Bakhrun now leads the motorized waste picker’s association. He set up a small office, and gave ID cards, uniforms, and safety equipment to the members. Ultimately, he successfully convinced the bank to offer him the loan, which he then used to buy a small truck to transport the recycled materials.

- BINTARI Foundation

Program Impact

147 No. of waste workers reached
↳ **59** of which are women

100% % of waste workers with improved livelihoods
↳ **100%** of which are women

100% % of waste workers with improved access to work support and benefits
↳ **100%** of which are women

1,700 households reached

+0.6 MT of plastics collected per month



- ✓ Increased involvement in decision-making processes around WMR systems
- ✓ Improved capacity to support waste worker integration
- ✓ Government stakeholders with increased awareness of gender-sensitive WMR

Project outputs



Reciki



July 2021 - April 2022



Lamongan, Indonesia



reciki.co.id

Reciki is a waste management company that provides end-to-end solutions for waste management and environmental development in Indonesia. It partners with governments, communities, and companies to reduce waste from collection, achieving maximal landfill deviation while recovering and repurposing valuable resources.

Project context

Reciki's goal was to increase the livelihoods and advancement of informal workers in waste management, especially women, while also making use of local integrated waste management sites that were underutilized.

Project description

Through their 'Leakage and Livelihoods' project, Reciki established a repurchasing, or 'buy-back' center specializing in rigid plastics for waste pickers and cart waste workers, involving stakeholders in four sub-districts in Lamongan.

The buy-back center was launched in October 2021 at Ronggohadi Recycling Center, one of the facilities owned

by the Lamongan Regency Environmental Service. The event was attended by local actors in the waste value chain and other stakeholders, including residents. The attendees were included in gender equality awareness activities and occupational health and safety training, which were held as part of the launch event. Through the event, 10 women and 7 men expressed their interest in joining the buy-back center program.

While onboarding the waste collectors into the program, Reciki provided training to increase their understanding of how to sort different plastic materials for recycling. The collectors were also equipped with adequate personal protective equipment (PPE) and given access to the national social security and health insurance program (BPJS Ketenagakerjaan). The Reciki team also conducted socialization sessions and educational campaigns across six sub-districts, including going door-to-door to distribute instructional pamphlets, in an effort to encourage the public to sort their waste at source, so that their plastic waste can be handled and recycled properly.

To further build an integrated waste recycling management system, Reciki studied local household waste and conducted a brand audit, building a deeper understanding for local waste value chain actors and companies about product absorption in the communities.

Program Impact



12 No. of waste workers reached
↳ **11** of which are women

100% % of waste workers with improved livelihoods
↳ **100%** of which are women

100% % of waste workers with improved access to work support and benefits
↳ **100%** of which are women



50 households reached

+6.5 MT of plastics collected per month

- ✓ Increased involvement in decision-making processes around WMR systems
- ✓ Improved capacity to support waste worker integration
- ✓ Government stakeholders with increased awareness of gender-sensitive WMR





Blue Ocean Plastic Recycling



July 2022 - February 2023



Koh Samui, Thailand



michel@mailadvisor.net

Blue Ocean Plastic Recycling Co Ltd (BOP) is a social business that aims to reclaim, recycle and upcycle certified ocean-bound plastics in Thailand. BOP works with foundations, NGOs, and local and international brands to promote a circular economy for plastics, with transparency and traceability as its core values.

Project context

BOP's work to improve plastic recycling rates and social equity on the popular island of Koh Samui draws inspiration from their sister organization, Ranong Recycle for Environment Social Enterprise (Thailand). The original Ranong model is being adapted to suit the geography and existing supply chain actors of Koh Samui, and in particular the unique nature of the local communities that BOP seeks to support with income-generating opportunities.

Project description

With support from The Incubation Network, BOP set out to establish the systems and infrastructure necessary for improving the collection of valuable plastic in Koh Samui and in doing so, create sustainable work for

independent waste collectors from communities of fishers and religious minorities. BOP field coordinators have recruited and trained waste collectors from three different communities. They have also established, or are in the process of establishing centralized waste banks within those locations, and are in talks with several more communities. BOP is paying the collectors above-market rates for their recyclable plastic material using an incentive scheme similar to plastic credits, which will be ultimately certified as Ocean-Bound Plastic, processed and sold by BOP as premium recycled material for consumer brands.

Introducing newly-organized waste collection infrastructure comes with challenges. BOP has been working to establish a unique benefits profile to suit the needs of each community, and experimented with different forms of waste banks that can provide a central facility without causing concerns for residents. This includes using a container, which can be moved if needed, or utilizing existing public infrastructure, such as within temple grounds. Community awareness-raising also forms part of BOP's efforts, and this has been taken up by the waste collectors and community leaders themselves, who have conducted campaigns at a local school.

BOP's ultimate goal is to establish fully transparent and traceable plastic recycling supply chains. While their

hub-and-spoke community collection has provided income-generating opportunities to island locals, they have also worked to create forward market linkages. In Surat Thani, they have established delivery from a collection center to a processor and shipped pellets to an international brand. BOP is also setting up offtake agreements for non-recyclable plastics; such as, with companies using post-consumer plastics to make “ecobricks” for construction. They are working to secure plastic credits, and meeting with processors in Bangkok to set up the full supply chain and vertical integration.



Meeh is a 28 year old recycler who wants to develop his business with us, in particular to build more transparent practices, the ability to process more materials, and skills for himself as an entrepreneur. Through working with BOP he hopes to gain access to other markets, including plastic credits, and to understand the process for becoming Ocean-Bound Plastic certified. Meeh also wants to learn English from our local field staff, so that he can communicate with BOP's foreign leaders directly.

- Blue Ocean Plastic



Program Impact

25 No. of waste workers reached
↳ **16** of which are women

+0.4 MT
of plastics collected per month

35 households reached

✓ Government stakeholders with increased awareness of gender-sensitive WMR

✓ Increased involvement in decision-making processes around WMR systems





Pure Oceans



October 2022 - December 2022



Tingloy, Philippines



pureoceans.co

Pure Oceans is a Philippines-based marine conservation social enterprise working with below-the-poverty line island and coastal communities. They work together with these communities to design waste management systems that are appropriate for each location, taking into account their geographic challenges.

Project context

Pure Ocean helps to coordinate a Materials Recovery Facility (MRF) on the island of Tingloy, in the Batangas province of the Philippines. The day-to-day operations of the MRF are managed by a team of women, mostly community volunteers. Pure Oceans decided to optimize and codify its approach to running such a facility so that the model could be replicated in other disadvantaged island and coastal communities.

Project description

The first goal of the project was to establish a standardized, documented approach to running Pure Oceans' MRF and the plastic trading program on the island. With support from The Incubation Network, they engaged external consultants to assess and document the MRF operations, including aspects of plastic trading, storage, data collection, and monitoring. The result of the assessment was then crafted into a 'an MRF playbook'.

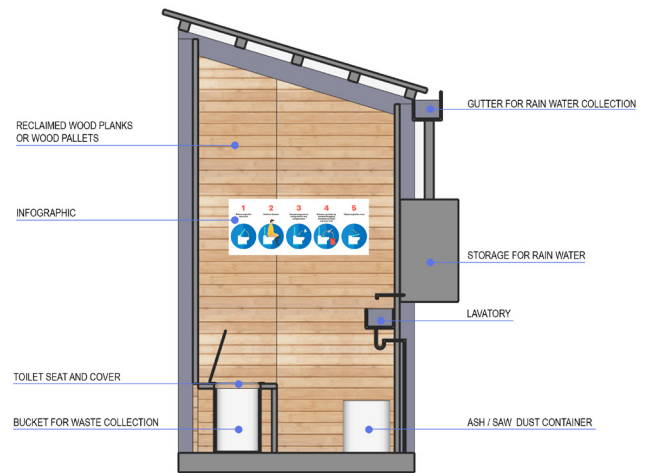
Secondly, they worked towards increasing the transparency and traceability of their operations, by providing IT hardware and skills training to the women leaders of the MRF. The women were provided with laptops to support the digitalization of data collection and management, and trained in bookkeeping. Pure Oceans also purchased portable solar lights as a contingency for frequent power outages. The work on digitization has prepared Pure Oceans to be responsive to upcoming extended producer responsibility (EPR) laws, and to become accredited as a plastic recovery program in future.

Finally, a composting toilet was installed at the MRF in order to improve working conditions.



“Having external actors impose ‘rules’, such as those around accreditation, can be helpful for achieving buy-in from community leaders and elders who may otherwise be reluctant to develop new (especially digital) skills. Being able to “blame” others, for want of a better term, can be helpful, as it allows us to push the agenda while still retaining the good rapport with community members.

- Pure Oceans



Program Impact

7 No. of waste workers reached
↳ **7** of which are women

67% % of waste workers with improved livelihoods
↳ **67%** of which are women

99 households reached

100% % of waste workers with improved access to work support and benefits
↳ **100%** of which are women

- ✓ Increased involvement in decision-making processes around WMR systems
- ✓ Improved capacity to support waste worker integration
- ✓ Government stakeholders with increased awareness of gender-sensitive WMR

Project outputs



Equality in Plastics Circularity

[View program >](#)



The Incubation
Network Presents

EQUALITY
in **PLASTICS**
CIRCULARITY

Supported by

SECOND
MUSE



The
Circulate
Initiative



GreenHub



October 2021 - November 2022



Phu Yen Province, Vietnam



greenhub.org.vn

GreenHub is a Vietnamese civil society organization that focuses on four impact areas: zero waste; plastic waste and marine plastic; sustainable agriculture; and natural conservation.

Project context

GreenHub set out to conduct detailed research to assess the needs and impacts of women informal waste workers (WIWWs) across the waste supply chain in Tuy Hoa City, Phu Yen Province, Vietnam, where women account for approximately 98% of the informal waste collection labor force. This project leveraged key relationships between GreenHub and the Phu Yen Department of Natural Resources and Environment (DONRE), the Women's Union of Phu Yen Province, and the Urban Environment Company of Phu Yen Province.

Project description

To assess the needs and contribution of WIWWs across the supply chain in Tuy Hoa City, GreenHub conducted surveys and key informant interviews involving women waste workers, waste collectors, and junk shops. The research, combined with training and outreach activities, informed the formulation of an action plan that can be enacted by relevant stakeholders, particularly the Women's Union.

There were three rounds of data collection between November 2020 and August 2022, involving a total of 147 respondents (86 informal waste workers, 36 formal waste workers, and 25 junk shops). The survey collected data on the role and contribution of waste workers while the interviews focused on understanding the waste management context in Tuy Hoa City, including the actors involved, the waste composition, and the waste path. The research findings showed that health and financial risks remain the biggest concerns for waste workers and others in the supply chain. Using the data collected, GreenHub produced a map of the informal waste collection and recycling system and highlighted the vulnerabilities experienced by actors along the supply chain. The map also provided a snapshot of the inner workings of the plastic supply chain - from the types of plastic, to waste prices and junk shop revenue trends.

In response to these identified concerns, and in collaboration with the Women's Union and DONRE, GreenHub also delivered capacity-building activities targeting WIWWs. Through several half-day workshops, WIWWs received training on work safety and waste management. In addition, GreenHub provided occupational accident insurance to 113 WIWWs, and health check-ups to 162 WIWWs.



The Incubation
Network Presents

EQUALITY
in PLASTICS
CIRCULARITY

Supported by

SECOND
MUSE



The
Circulate
Initiative

The work performed by GreenHub, supported by The Incubation Network, further affirmed the important and often overlooked contribution of IWWs in managing plastic waste, especially in places where the waste management system is still maturing. In an effort to counter the lack of public awareness, GreenHub also ran a media campaign focusing on plastic waste and the role of women in waste management that reached at least 669 people in the community through radio broadcasting and social media.



“Yen came from a poor urban family. Marrying her husband brought her to the Phu Hoa district, which has a long tradition of agriculture and farming. The chance to earn income by collecting waste informally helped Yen address the economic challenges her family was facing and to experience the satisfaction of earning money every day to help buy rice for her family. She has been collecting bottles for 21 years, and is grateful for how it has contributed to her family’s happiness and ability to raise their two children.

- GreenHub



Program Impact

581 No. of waste workers reached
↳ **451** of which are women

92% % of waste workers with improved livelihoods
↳ **92%** of which are women

65% % of waste workers with improved access to work support and benefits
↳ **65%** of which are women

472 households reached

- ✓ Increased involvement in decision-making processes around WMR systems
- ✓ Improved capacity to support waste worker integration
- ✓ Government stakeholders with increased awareness of gender-sensitive WMR



Project outputs



EcoSattva (Aurangabad)



November 2021 - December 2022



Aurangabad, India



carpeindia.org

EcoSattva Environmental Solutions is a women-led social enterprise in India that provides services in Solid Waste Management (SWM), Green Cover Management and Water Body Restoration.

Project context

Waste pickers in India face a multitude of challenges, often compounded by gender and caste discrimination. In order to make a living, their work centers around picking recyclables from mixed waste on street corners and in the open, or at best, sorting dry waste at a material recovery facility. While there are opportunities for waste pickers to become formalized waste management service providers, these opportunities are typically dominated by men and difficult for women waste pickers to access. The objective of EcoSattva's project was to expand the work of women waste pickers in the solid waste management sector.

Project description

EcoSattva set out to create a women waste picker-led business that would leverage the women's entrepreneurial spirits and waste management skills, while also helping to meet the waste management

needs of under-served local villages and businesses. EcoSattva initially tested the market in three locations (Aurangabad, Alibag, and Rajgurunagar), ultimately selecting Aurangabad as the most high-potential pilot site. Various stakeholders were interviewed during the field assessments, including village council members, small scrap dealers, and waste aggregators. At the same time, the EcoSattva team undertook a careful process to evaluate several waste pickers within their network who could be candidates for starting a new business. 13 women were shortlisted for interviews to determine whether they could: read, write, and perform basic calculations; displayed a willingness to learn new skills; and had no debt to scrap dealers (which can make it difficult for a waste picker to perform independently). From this process, Renuka Raykar, aged 21 with a 12th grade education, and Soni Kharat, aged 23 with a 7th grade education, were selected to partner with EcoSattva on a business that would ultimately be registered as "Unnati", meaning 'progress'.

As new waste entrepreneurs, Renuka and Soni received training in communication skills, digital literacy, English language proficiency, basic computer use, and circular economy principles. Significantly, they were also trained on how to drive, becoming the first known local women to drive a commercial vehicle in their community. To address the risks inherent in this project due to its



The Incubation
Network Presents

EQUALITY
in PLASTICS
CIRCULARITY

Supported by

SECOND
MUSE



The
Circulate
Initiative

reversal of gender norms, The Incubation Network engaged the services of local gender advisory firm Nari Samata Manch. Their gender experts worked closely with EcoSattva's management and teams of waste workers, as well as Renuka and Soni individually, to better understand the challenges of waste work and to advise EcoSattva on risk mitigation strategies, organizational policy, and transformative interventions to address gender norms.

With EcoSattva's support, Renuka and Soni went on to secure several contracts with local villages and commercial bulk wastegenerators. An early achievement occurred when Unnati achieved a milestone partnership with Johnson & Johnson, who used Corporate Social Responsibility funding to cover the dry waste collection, transportation, and processing service fees for one rural village for over a period of four months. This initial funding allowed for the costly process of behavior change communication to take place in the village, ensuring better source segregation of the dry waste and making the sustainability of the service model possible. This process was carried out door-to-door and with schools, with 150 students participating in an awareness rally on waste segregation.

By the end of the project support period, Unnati was providing collection services to at least six rural villages,

and Renuka and Soni were being trained to participate in the execution of EcoSattva's municipal solid waste management transformation process ("BOTRAM"). Unnati was also expanding: two new women waste pickers were also beginning their training journey towards becoming waste entrepreneurs like Renuka and Soni, and its services were being developed to include organic waste management, towards the ultimate goal of providing a 'turnkey' waste management solution.

EcoSattva found that the families of the women waste entrepreneurs are significant stakeholders, who hold the power to either enable or disable the women's engagement with the project. Familial support can unlock a woman waste picker's ability to undertake basic business administration tasks (like register a bank account in their own name), participate safely without fear, and gain the confidence required to carry out their duties. Soni's husband, Mr. Sachin, is proud of his wife and her new skills, saying:

"Our three daughters look up to their mother and follow her as a role model. Soni is not only contributing financially to our family, she is also contributing to Swachh Bharat Abhiyan [the 'Clean India Mission']"

Program Impact

30 No. of waste workers reached

↳ **29** of which are women

100% % of waste workers with improved livelihoods

↳ **100%** of which are women

100% % of waste workers with improved access to work support and benefits

↳ **100%** of which are women

6,960
households reached

1 MT
of plastics collected per month



Increased involvement in decision-making processes around WMR systems



Government stakeholders with increased awareness of gender-sensitive WMR





The Philippine Reef and Rainforest Conservation Foundation, Inc. (PRRCFI)



November 2021 - November 2022



Talisay City, Negros Occidental,
Philippines



prrcf.org

The Philippine Reef and Rainforest Conservation Foundation, Inc. (PRRCFI) is a not-for-profit, non-governmental organization established in 1994 that acts as the caretaker for Danjungan Island in the province of Negros Occidental. PRRCFI runs several environmental programs that focus on biodiversity conservation, nature tourism, science and research, environmental education, solid waste management, and zero-waste initiatives.

Project context

Since 2018, PRRCFI has been building momentum around a homegrown movement called “Wala Usik” - a local phrase used as a cultural reminder to ‘not waste anything’, and to honor the value of materials produced and consumed. Over the past four years, PRRCFI has helped put into place key partnerships for this

movement. These partnerships have produced valuable prototypes of innovative solutions and knowledge assets, such as guides, for a circular economy.

Project description

“Women Waste Workers for Wala Usik: Co-Designing a Circular Economy”, or “WOW Wala Usik”, was a one-year project that provided opportunities for diverse solid waste management (SWM) stakeholders in Talisay City, Negros Occidental. The project focused primarily on women informal waste workers (waste pickers, street cleaners, and junk collectors), as well as the local government staff in charge of SWM programs and policies, universities, and local civil society organizations and enterprises aligned with circular economy principles.

In order to better understand the challenges of the women informal waste workers, and then co-create solutions, PRRCFI developed and implemented a localized version of a three-stage “design thinking” framework. The three stages were: Empathize and Define; Ideate, Prototype, and Test; and Implement, Communicate and Measure. As part of the initial stage,



The Incubation
Network Presents

EQUALITY
in PLASTICS
CIRCULARITY

Supported by

SECOND
MUSE



The
Circulate
Initiative

waste worker partners took part in a learning exchange, where they explored best practices in SWM within the province of Negros Occidental. They joined other SWM stakeholders in discussing the importance of good governance, proper waste management, and strict implementation of policies. Following capacity-building workshops to promote creativity around valorizing waste, the 12 waste workers then participated in a design thinking workshop to co-design and prototype innovations to assist them in their day-to-day jobs. Two final designs were selected for prototyping: a bespoke cart ("kariton") for segregated collection; and an electric 'mobile junkshop'. The customized cart design in particular inspired the city government of Talisay to create a similar mobile collection and segregation station for use within the city plaza.

Finally, PRRCFI gathered 21 stakeholders (17 women, four men), including waste workers and local leaders, to develop a gender-responsive policy action plan for Talisay City. The resulting document will be used as a guide for local government leaders as they plan and prioritize SWM efforts for 2023-2024. Priority steps were identified in four focus areas: information, education and communication; engineering and equipment;

enterprise development; and enforcement. The guide also includes the findings of a rapid gender analysis and time allocation study that PRRCFI conducted with Talisay City's waste workers. It is hoped that the local government will replicate the innovations designed as part of the project.

Waste worker Nay Amelita can foresee herself making a decent living by collecting and selling scrap items. This is why she was thrilled with WOW Wala Usik's Customized Kariton and how it aids her in her job. It is now easier for her to segregate sellable waste items using categorized waste bins. Different kinds of waste are no longer mixed in one container, which makes it safer and more efficient for her because she doesn't have to sort through the waste mound after collecting them.

- PRRCFI

Program Impact

52 No. of waste workers reached
↳ **25** of which are women

100% % of waste workers with improved livelihoods
↳ **100%** of which are women

100% % of waste workers with improved access to work support and benefits
↳ **100%** of which are women

255
households reached

- ✓ Increased involvement in decision-making processes around WMR systems
- ✓ Improved capacity to support waste worker integration
- ✓ Government stakeholders with increased awareness of gender-sensitive WMR



Project outputs

WOW Wala Usik website, containing [project video](#) and [Gender-Responsive Solid Waste Management](#) for Talisay City



chintan
environmental research and action group

Chintan



November 2021 - December 2022



Delhi, India



chintan-india.org

Chintan is a non-profit organization dedicated to achieving inclusive, sustainable, and equitable growth for all. The organization works on sustainability through the lens of solid and hazardous waste, and air pollution. Its core work includes practical, participatory research, project implementation, training, advocacy, and outreach. Chintan also offers waste management services such as doorstep collection, recycling, composting, and e-waste collection.

Project context

Women waste workers in India face a multitude of challenges including limited access to training and education, hazardous working conditions, while facing stigmatization and marginalization due to their gender and profession. There was limited data available to understand how relevant actors in the ecosystem can better support these women in improving their well-being and livelihoods. In collaboration with the Municipality of New Delhi and women waste workers, Chintan conducted an action research project to close this knowledge gap.

Project description

A key objective of this collaborative action research project was to capture data on gender in plastic waste management to inform the identification of recommendations to improve the livelihoods, dignity, and working conditions for women waste workers. To achieve this objective, Chintan used different research instruments including surveys, observation, record sheets, and focus group discussions.

Twenty-four research participants were involved in the survey conducted in two municipal zones: New Delhi Municipal Council (NDMC), and Municipal Corporation of Delhi-South Zone (MCD-S). In each municipal zone, a control and intervention group were set up. The control group consisted of 10 participants with an equal number of men and women participants. The intervention groups (one man and one woman in each zone) were provided access to small waste collection facilities or Material Recovery Facilities (MRFs). All research participants also received capacity-building support, including training on family budgeting, financial management, and awareness of gender-based violence at work. Additional technical support was provided by The Incubation Network through Frametrics, a research consultancy firm, that conducted a social network analysis that built on Chintan's initial findings.



The Incubation
Network Presents

EQUALITY
in PLASTICS
CIRCULARITY

Supported by

SECOND
MUSE



The
Circulate
Initiative

The research showed that waste workers with access to MRFs received higher income than waste workers in the control group. Findings from the research highlighted the importance of access to workspaces such as the MRFs in improving access to high-value plastics, which subsequently increased workers' income. The research showed that inequality persists among men and women in the informal waste sector; for example, women and men have different levels of access to information and plastic materials, which affects their livelihoods. One key challenge the team encountered during the data collection was maintaining the trust of the research participants. The sensitive nature of the information collected (e.g. record sheet and income data) required additional investment in the relationship between the researcher and research participants, which proved challenging.

This action research project culminated in a launch event in January 2023 where Chintan presented their findings to several high-profile officials, including the Mission Director of Swach Bharat, or Clean India, (a flagship initiative of the Government of India) and the national spokesperson of the Bharatiya Janata Party (BJP), the ruling political party in India.

Cultural barriers exist even in cases of economic equality. This was seen in the case of a participant who, despite being a successful businesswoman earning ample profits, faced gender-based violence. Some of the male members of the community spread rumors about her, with an intention to erode her leadership and take away her space of work. This was extremely damaging to her reputation in the community. Therefore, even as an enabling work environment is created for women, the gap can only be closed when the community - including men and civil society organizations - is trained on recognizing and eliminating gender-based violence and discrimination.

- Chintan

Program Impact

32 No. of waste workers reached
↳ **13** of which are women

92% % of waste workers with improved livelihoods
↳ **91%** of which are women

85% % of waste workers with improved access to work support and benefits
↳ **84%** of which are women

110
households reached

3.5 MT
of plastics collected per month

- ✓ Increased involvement in decision-making processes around WMR systems
- ✓ Improved capacity to support waste worker integration
- ✓ Government stakeholders with increased awareness of gender-sensitive WMR



Project outputs



The Centre for Social Research and Development (CSRSD)



October 2021 - December 2022



Hue, Vietnam



csrds.vn

The Centre for Social Research and Development (CSRSD) is a nongovernmental organization working to seek justice for vulnerable communities threatened by external change in Vietnam as a result of climate change and economic development. They work to create community resilience with work that falls into three pillars: climate crisis; water governance; and waste management with a focus on women's empowerment.

Project context

Limited data is a hindrance to formulating effective policy and innovation, especially within parts of the waste management and recycling systems that rely on women with precarious livelihoods. In Vietnam, limited insights on the challenges and opportunities within the informal waste sector, as well as a lack of data on the plastics value chain, continue to undermine efforts by civil society to support informal waste workers.

Project description

The Incubation Network supported CSRSD in conducting research that explored the role and contribution of women waste workers (WWWs), both formal and informal, in the city of Hue in central Vietnam. To complement these insights, CSRSD also mapped the plastic value chain, and ultimately presented their findings to policymakers.

The research applied Feminist Participatory Action Research (FPAR) methods in order to understand the roles, contributions and aspirations of WWWs in detail. To facilitate the active participation of the WWCs as co-researchers on the project, CSRSD held 10 meetings and provided the WWWs with training on research methods, including problem analysis and stakeholder mapping. As part of their collaborative undertakings, CSRSD collected personal narratives from 14 WWWs (seven from the informal sector, and seven who were employed by the company contracted to collect municipal waste). For four weeks the WWWs were asked to respond to various writing prompts, ranging from personal health to their aspirations, and shared their personal stories. In addition, to better understand the role and contribution of WWWs within the broader waste management



The Incubation
Network Presents

EQUALITY
in PLASTICS
CIRCULARITY

Supported by

SECOND
MUSE



The
Circulate
Initiative

ecosystem, CSRD conducted a rigorous waste management policy analysis focused on Hue City, and conducted a survey that involved 320 participants, including waste workers, residents, junk shop operators, and government officials. It also mapped the plastic value chain in Hue, including the gendered division of labor, and highlighted opportunities to advance gender equality. At the end of the project period, CSRD produced detailed recommendations to improve the integration of informal WWWs into the waste management system in Hue.

The project culminated in a policy dialogue involving local government, private sector actors, and WWWs. While the research activities have generated rich insights, translating them into policy influence has proven to be more challenging, especially given the complex advocacy landscape in Vietnam. However, the research findings have enabled CSRD to establish relationships with relevant government agencies and companies, including the municipal waste contractor; the pioneering nature of their dataset was especially useful in establishing these relationships

“Women waste workers told us that most residents did not show them respect, due to the nature of their work. But after working with us for over a year on this project, they felt that more respect had been shown to them, and to their work on the waste problem.”

- CSRD



Program Impact

67 No. of waste workers reached
↳ **65** of which are women

334 households reached

- ✓ Increased involvement in decision-making processes around WMR systems
- ✓ Improved capacity to support waste worker integration
- ✓ Government stakeholders with increased awareness of gender-sensitive WMR



Project outputs

CSRD's research report is available upon request



Pure Oceans



October 2021 - December 2022



Philippines



pureoceans.co

Pure Oceans is a Philippines-based marine conservation social enterprise working with below-the-poverty line island and coastal communities to design waste management systems where there are few, if any, municipal resources available. Their work is currently focused on the island of Tingloy, Batangas which belongs to the Verde Island Passage, part of the global center of marine biodiversity.

Project context

Every day, Filipinos use and dispose of around three million single-use diapers and 164 million sachets (small, sealed plastic packaging that makes up 52% of the residual plastic waste stream in the Philippines). Much of this waste ends up polluting waterways across the archipelago, causing harm to the natural environment, human health, and local industries.

Project description

The project's objective was twofold: to reduce single use plastic waste, and to transform women's lives in underprivileged communities. Pure Oceans set

out to achieve this by establishing small-scale pilots for models that offer women more environmentally conscious choices as consumers, while also creating innovative new ways for local women to become key actors in those supply chains. Pure Oceans' prototypes were developed utilizing insights from 530 household surveys and 30 deep interviews; The Incubation Network provided support for the technical assistance required to analyze the data.

The first pilot was a cloth diaper subscription service, known as the "Lampin Club", in which local women were trained as sales and logistics agents. Soiled diapers were collected from parents and exchanged for laundered cloth diapers. Over the course of nine months, and across the three pilot sites, the use of 21,960 disposable diapers was avoided by 40 low-income mothers with babies. In addition, those 40 households enjoyed cost savings of between P640-740 (US\$12-14) per month, and each "momprenuer" agent received an additional monthly income of US\$150.

The second pilot was a direct sales business model that engaged local women to sell refillable personal care products, at a unit price comparable to the typical single-use sachets. Pure Oceans purchased wholesale white label products, developed a new brand called "Ocean Glamore", recruited five sellers, and equipped local



The Incubation
Network Presents

EQUALITY
in PLASTICS
CIRCULARITY

Supported by

SECOND
MUSE



The
Circulate
Initiative

women to provide services for marketing. The business-to-consumer sales model faced early challenges, with sales agents incurring high costs of sales in their efforts to change consumer behavior. However, one seller did establish a successful business-to-business model, engaging a dive resort to replace their toiletry packages with refillable options, thereby saving 480 shampoo sachets and 192 individually packed soaps over the course of two months.

Despite some challenges, both pilots generated buzz and engagement, especially with mothers with babies and local government officials. However, the financial viability of each model was hampered by extreme weather events, causing a lack of power or water, volatile supply and demand, and macroeconomic factors. While the pilots did not prove sustainable as stand-alone businesses in very low-income areas, Pure Oceans did receive signals of demand from middle-income consumers and businesses, and sees potential for a model wherein a more premium product helps to subsidize an offering to base-of-pyramid customers.

“One major challenge with the reusable diaper model was overcoming local cultural norms around caring for babies. There was a prevailing belief that anything that touched a baby’s skin should be washed by hand, and the cloth diapers were being machine-laundered, which was an early barrier to adoption by the mothers. This was eventually overcome thanks to significant effort on the part of the “mompreneur” agents. Creating a community (club) in which such doubts could be openly discussed, and the success of early adopters could be demonstrated, proved key to success.

- CSR D

Program Impact

576

households reached

0.3 MT

of plastics collected per month



Increased involvement in decision-making processes around WMR systems



Improved capacity to support waste worker integration



Government stakeholders with increased awareness of gender-sensitive WMR



Project outputs



The Incubation
Network Presents

EQUALITY
in PLASTICS
CIRCULARITY

Supported by

SECOND
MUSE



The
Circulate
Initiative



Kashtakari Panchayat



December 2021 - February 2023



Pune, India



kashtakaripanchayat.org

Kashtakari Panchayat (KP) supports about 8,000 of Pune's waste pickers, their families, and their collectives (including Kagad Kach Patra Kashtakari Panchayat [KKPKP], SWaCH Pune Cooperative and SWaCH Plus Cooperative). Over their years of operation, KP has evolved to address the financial, technical, administrative and legal needs of waste pickers' collectives, and functions as a bridge facilitating dialogue and linkages between them.

Project context

Due to the marginalized position of waste pickers in the value chain and their lack of negotiating power, waste pickers are usually not adequately compensated and live below the poverty line. To address this issue, KP's programs are designed to strengthen the livelihoods of waste pickers by empowering them to occupy higher echelons within the recycling space; this can be by operating sustainable enterprises that promote reuse and recycling, undergoing training to build the capacities of waste pickers, or increasing waste pickers' visibility as frontline environmental workers.

Project description

With support from The Incubation Network, KP's objective was to enhance the livelihoods of waste pickers by piloting new, vertically-integrated supply chains for businesses that are owned and operated by waste pickers, thereby de-risking and supporting their expansion into new forms of sustainable, replicable, and scalable business models.

One option that KP pursued was to set up a decentralized network of waste picker-led recycling processing facilities that would either sell plastic flakes, pellets or granules, or add value by leveraging innovative technology that produces 3D printing filament from recycled HDPE plastic waste. KP took steps to identify suitable locations for such processing units, selecting a location in which nearby waste picker-owned scrap shops could be part of the new supply chain. They also undertook extensive learning from a number of recyclers and recycling machinery manufacturers, and procured machinery. While certain regulatory steps led to pivots and delays, KP took the opportunity to codify their learnings and engaged expert consultants to advise them on the relevant regulations. By the end of the project period, they were in the process of obtaining the necessary permissions for an appropriate site.

In the meantime, KP set out to inaugurate at least one



The Incubation
Network Presents

EQUALITY
in PLASTICS
CIRCULARITY

Supported by

SECOND
MUSE



The
Circulate
Initiative

additional cooperative scrap shop, to be owned by up to 50 waste pickers. KP developed training materials in Marathi for waste pickers about the benefits of cooperative enterprises, plastic waste management policies, and inclusive plastic waste management models. By the end of February 2023, KP had received commitments from 36 waste pickers, 32 of whom are women. Based on this commitment, they inaugurated the cooperative scrap shop in February 2023. KP also developed a manual of Standard Operating Procedures, in both Marathi and English, to share with other waste picker organizations for the purpose of setting up similar cooperative shops.

Finally, KP developed training material and delivered information to waste pickers about current global debates around plastic, the limitations of recycling, Extended Producer Responsibility (EPR), and how policy and market shifts may affect the recycling trade in a way that severely threatens the informal sector. The waste pickers that KP supports are now considering a formal position on such issues, and setting out their long-term priorities. They will use this new information and stance to engage in policy advocacy, and make decisions around future-proofing their businesses.

Vani Sharda Madhukar has been picking waste for over 22 years. She has been selling scrap material to a private scrap shop all her life. On the day of the inauguration of the informal waste pickers co-operative scrap shop, she was the first waste picker to sell to the cooperative scrap shop, of which she is one of the founding members. On her first trade, she received more than twice the total sales price than she normally would.

- Kashtakari Panchayat



Program Impact

50 No. of waste workers reached
↳ **48** of which are women

100% % of waste workers with improved livelihoods
↳ **100%** of which are women

100% % of waste workers with improved access to work support and benefits
↳ **100%** of which are women

30 households reached

11 MT of plastics collected per month

- ✓ Increased involvement in decision-making processes around WMR systems
- ✓ Improved capacity to support waste worker integration
- ✓ Government stakeholders with increased awareness of gender-sensitive WMR



Project outputs



WWF-Philippines



January 2022 - December 2022



Philippines



wwf.org.ph

WWF-Philippines is a national organization under the WWF network that works to improve lives by crafting solutions to climate change, providing sustainable livelihood programs, and conserving the country's richest marine and land habitats. This project is led by the Program Manager for WWF-Philippines' No Plastics in Nature Initiative (NPIN) program, which aims to stop plastic waste leakage by 2030.

Project context

A recent WWF study showed that Filipinos are consuming about 20 kg of plastics per person per year, out of which 15.43 kg of plastics are not recycled. The experience of implementing the No Plastics in Nature initiative (NPIN) has shown how women tend to bear the burden of plastic management at the household level, and they often feel obligated to extend this responsibility in service of their community. However, this significant contribution often goes unnoticed, and women involved in the plastic value chain tend to be the most vulnerable in their communities.

Project description

This project was conducted in a partnership between WWF Philippines and the Angat Bayi Women's Political Empowerment Program ("Angat Bayi"), a fellowship program for local women politicians that is facilitated by the University of the Philippines Center for Women's and Gender Studies (UPCWGS). The partners sought to better understand Filipino women's perception of their role in the plastic value chain and their expectations of other stakeholders. With these findings, they set out to document potential gender-responsive policy interventions, and equip local women policymakers to enact change in their communities.

As part of the research, WWF Philippines and UPCWGS conducted an online survey involving a random sample of 170 women to generate insights regarding Filipino women's knowledge, attitudes, and perceptions of plastic reduction and recycling. Responses from the survey formed the basis of in-depth key informant interviews involving 94 respondents from Batangas City, Municipality of Barugo, and Cagayan de Oro City. Focus group discussions were also conducted with the informal waste sector. All findings have been incorporated into training tools, communications materials, and policy toolkits to guide gender-inclusive



The Incubation
Network Presents

EQUALITY
in PLASTICS
CIRCULARITY

Supported by

SECOND
MUSE



The
Circulate
Initiative

waste management strategies at the community, local, and national government levels.

The project outputs were key to driving advocacy efforts that leveraged WWF Philippines' and Angat Bayi's networks with Local Government Units (LGUs). The toolkits were received positively by local policymakers and officials from the House of Representatives and Senate at the national level. At the end of the project period, WWF Philippines reported that two LGUs have committed to integrating gender into their 10-year solid waste management plan.

Supporting waste workers has been a challenge for policymakers, particularly in the budget allocation for keeping them protected. We hope the recently passed Extended Producer Responsibility (EPR) law helps in the inclusion of waste workers and in providing insurance for these people who help in the plastic waste diversion.

- WWF-Philippines

Program Impact

36 No. of waste workers reached
↳ **36** of which are women

500 households reached

- ✓ Increased involvement in decision-making processes around WMR systems
- ✓ Improved capacity to support waste worker integration
- ✓ Government stakeholders with increased awareness of gender-sensitive WMR

Project outputs

- Research report: "Research Assessment on the Attitudes and Motivations of Women in Waste Generation, Diversion and/or Reduction in the Philippines"
- Research brief
- Plastics and Gender Policy Toolkit
- Plastics and Gender Communication Toolkit



About



The Incubation Network

The Incubation Network is an impact-driven initiative that sources, supports and scales holistic innovative solutions to combat plastic pollution through strengthening entrepreneurial ecosystems with a diverse network of key partners.

Part of a highly collaborative community of startups and entrepreneurs, investors, partners and programs, The Incubation Network works together with industry players to tackle key barriers to address plastic leakage and advance a circular economy. This includes sourcing and supporting, to scaling early stage or pre-investment solutions and connecting compatible ecosystem players to reinforce the value chain in waste management and recycling.

Established in 2019, The Incubation Network is a partnership between non-profit organization, The Circulate Initiative and impact innovation company, SecondMuse. The Incubation Network is open to interested collaborators, corporations, and mentors, looking to address plastic leakage and advance a circular economy in South & Southeast Asia.

For more information, visit: incubationnetwork.com

Powered by

SECOND
MUSE



The
Circulate
Initiative

Supported by

Canada

Program undertaken with financial support
of the Government of Canada provided
through Global Affairs Canada

ALLIANCE
TO END
PLASTIC
WASTE

ECCA FAMILY
FOUNDATION





hello@incubationnetwork.com | incubationnetwork.com

