



A compendium of case studies informal waste sector engagement

Developed by



Confederation of Indian Industry



CII-ITC Centre of Excellence
for Sustainable Development



Supported by



Funded by



UK Research
and Innovation
India
भारत

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Consultations: This report is a product of primary and secondary research, based on interactions with stakeholders across the plastics value chain. The India Plastics Pact is grateful to individual experts and specialists for valuable inputs and insights during the preparation of this report. The support of India Plastics Pact Member and Supporter organisations is appreciated and acknowledged.

Funder: UKRI India

Date of publication: October, 2023

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Introduction

This document aims to provide India Plastics Pact members and supporters with insights into various initiatives undertaken to include and integrate the informal sector waste workers into the formal waste management system. This will help us to develop more understanding of the:

- aspects that should be considered while designing an informal sector integration model,
- priority areas that can be considered for engaging with the informal waste sector, and,
- help catalog, compare, and document the contrasting approaches of the different IWS initiatives.

Context

India's plastic waste collection system is a combination of formal and informal sectors. The informal waste management sector manages about 40% of the total plastic waste generated in India. The India Plastics Pact (IPP) understands and recognizes the importance of the informal waste sector in the country and believes it is essential to engage with them to improve the overall collection, segregation, and recycling of plastic waste in the country. This will directly feed into achieving the Pact's target 3, aimed at increasing plastic packaging reuse, collection, and recycling.

Therefore, in order to work towards identifying challenges while engaging with the informal sector, IPP formed Sprint Group 1 Informal Waste Sector Engagement, which worked towards identifying opportunities for engaging with the informal waste sector, challenges faced by the informal waste sector, and how can those challenges be mitigated.

Mainstreaming the informal waste sector and including them in the formal waste management system will result in higher plastic recovery contributing to achieving the India Plastics Pact target 3, i.e., how can more high-quality material be collected and effectively recycled?

As a result of the informal sector technical report and Sprint Group meeting, Secretariat identified the challenges that needed to be addressed to successfully integrate the informal waste sector with the formal waste management system. Therefore, Secretariat developed a repository of best practices where organisations, through their initiatives, address or work towards solving the challenges.

With this idea, the Secretariat invited representatives from the selected organizations to present their initiatives for engaging with the informal waste sector to IPP members and supporters. This document catalogues all the initiatives to help us compare and document the contrasting approaches.

Identified gaps

Based on discussions with multiple stakeholders, the Sprint Group 1 of Collaborative Action Group 3 (CAG 3) identified six enablers that could help integrate the informal sector waste workers into the formal waste management system. The six enablers are as follows:

ENABLER 1 Secure and regularised employment	ENABLER 2 Access to infrastructure	ENABLER 3 Capacity building	ENABLER 4 Capacity building of other stakeholders
Informal sector waste workers are most commonly subjected to irregularities in revenue from daily operations and exploitation from middlemen. As they are not legally contracted employees, waste workers do not have job security.	The current infrastructure in the country is not up to the mark, and it is insufficient to deal with the total waste generated in the country. Moreover, the existing infrastructure is not available to the informal waste workers to collect and segregate the waste. This means that the waste workers collect and segregate waste in their backyard, which leads to various health issues.	Informal sector workers require capacity building to understand the more regularised manner of operating. Capacity building can include (but not limited to): <ul style="list-style-type: none">• working under compliance,• working in the coordination of the formal stakeholders,• organising and working collectively, and,• business running and operating skills.	Apart from capacity building for informal sector workers, there is also a requirement to develop the capacity of the multiple stakeholders involved in the value chain ranging from government bodies, bulk generators, private recyclers, and individual consumers, so that the uptake of services from informal sector waste workers can be increased.
ENABLER 5 Social inclusion	ENABLER 6 Employment opportunity		
Acceptance as a contributing member of society is also an essential step towards the successful inclusion of the informal waste sector workers. Currently, waste workers are discriminated against based on their occupation.	Informal waste workers usually do not have the platforms or opportunity to be employed by any private or governmental body due to various issues. Resulting in increased reliance on exploiting contractors and middlemen for work. Employment opportunities can be provided in two ways: <ul style="list-style-type: none">• Partnership with government: by getting the waste worker registered with the local government as a Safai Sathi (who can be called by different names in different parts of the country). This helps informal waste workers have a regularised job and also an identity that allows the waste workers to attain the benefits of various government schemes.• Partnership with private players: contractual opportunity with private stakeholders such as recyclers and other waste management organisations can also provide waste workers with means to get regularised.		

Multiple isolated initiatives have been taken up across India to bridge these gaps. Every initiative has unique aspects, which could include demographic features of the area, active interest of the government, etc. Going ahead, we will explore the various initiatives and analyse how the initiative has addressed or plans to address the identified gaps.



Case studies

From the vast repository of initiatives that the IPP Secretariat has been able to assemble, the Secretariat identified 11 organisations that are working towards addressing the gaps discussed earlier. A representative from the selected organisations (consisting of both organisations

that are part of IPP and those that are not) was invited to present their initiative in front of the IPP membership. Going ahead, we explore initiatives from the selected organisations and understand how these initiatives help solve the identified gaps.

CASE STUDY 1

**Green Worms
Waste Management
(Green Worms)**

CASE STUDY 2

**Chintan Environmental
Research and
Action Group (Chintan)**

CASE STUDY 3

Recykal

CASE STUDY 4

**Hasiru Dala Innovation
and Hasiru Dala
Not for profit**

CASE STUDY 5

**Social Lab Environmental
Solutions Pvt. Ltd.**

CASE STUDY 6

**Alliance of Indian
Waste Pickers**

CASE STUDY 7

**Saahas Waste
Management Pvt. Ltd.**

CASE STUDY 8

SWaCH

CASE STUDY 9

**Stree Mukti
Sanghatana**

CASE STUDY 10

Waste Warriors Society

CASE STUDY 11

ReCircle



Case study 1

Green Worms Waste Management (Green Worms)

Organisation overview

Green Worms is a social impact and circular economy startup founded in 2014 and headquartered in Calicut, Kerala. They are present in Kerala, Lakshadweep Island, and Andaman Island.

The organisation works closely with the informal waste sector workers by creating dignified jobs through a circular economy to eradicate plastic pollution and poverty in Indian rural coastal areas.

Through the initiatives implemented, Green Worms has created 944 micro-entrepreneurs working in waste management, generated 312 permanent full-time jobs created in segregation and processing units, and is able to process 1500 metric tons of waste per month.



Figure 1: Engagement of female workforce at Greenworms' MRF

Initiatives

- **Work force development:** this initiative aims to train women with technical and professional skills, such as waste collection and providing logistical solutions, to build a female workforce in waste management. For this purpose, Green Worms partnered with HKS (Haritha Karma Sena), a women's collective working to collect non-biodegradable waste in villages. Green Worms has also been providing capacity building and assistance to HKS for the collected waste.
- **Unique selling point at MRF:** waste management services in rural coastal areas are limited due to the unavailability of last-mile connectivity. Therefore, Green Worms is working towards creating a professional workforce for operating the MRF and creating micro-entrepreneurs for waste collection, ensuring 100% traceability of work and the opportunity for formalisation. This helps facilitate the last-mile collection of waste and ensures a credible end market along with formal working conditions for the waste workers.

Gaps addressed

- **Integration of waste workers:** the initiatives by Green Worms onboard the waste workers of the HKS group as contractual workers to collect and segregate plastic waste from the area.
- **Access to infrastructure:** their initiatives work towards providing physical and technological infrastructure, such as MRF, for providing a destination to the collected waste by HKS and QR code-based traceability to profile and quantify waste collected from each household.
- **Capacity-building:** the waste workers on-boarded by Green Worms are trained to operate and work like small and micro-entrepreneurs, and to use technology to ensure traceability efficiently.
- **Social inclusion:** Green Worms ensured social inclusion by formalising waste workers into a collective or association such as HKS (Haritha Karma Sena). The collective and Green Worms work towards facilitating identity cards for waste workers and advocating to the government for recognition and verification. Apart from this, Green Worms also supports waste workers by helping them to avail benefits from Government Schemes and by providing regular mentorship and training.

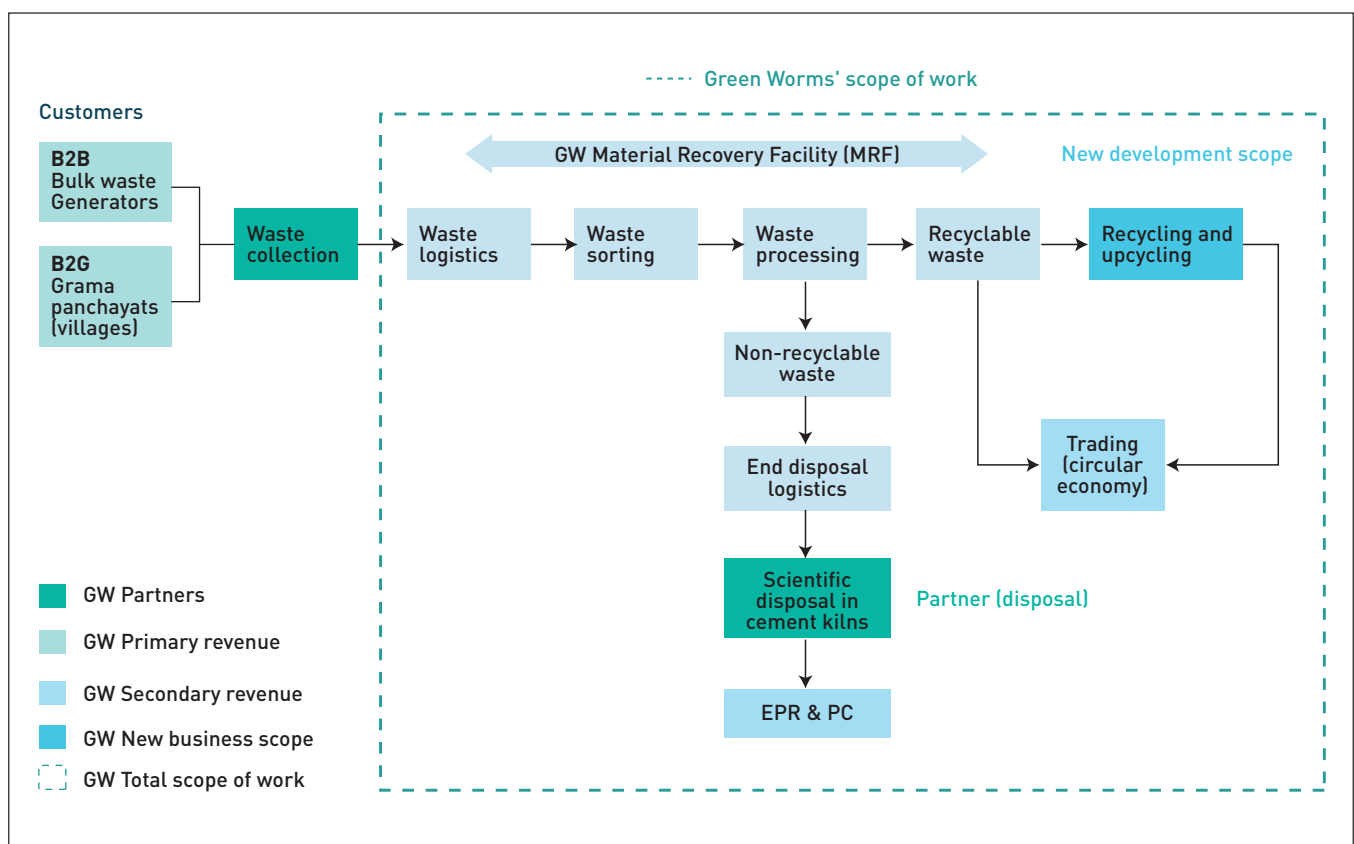


Figure 2: Working model of Green Worms¹

Chintan Environmental Research and Action Group (Chintan)

Organisation overview

Chintan is a non-profit and non-governmental organisation, working to address environmental and social justice issues for informal waste workers. Their vision is to ensure inclusive, sustainable, and equitable growth for all.

The organisation works towards providing waste management services by establishing infrastructure to manage waste, providing capacity building for waste workers to work in an environmentally compliant and organized manner, providing professional services to various private and government bodies for waste management, and enabling door-to-door collection of waste through the informal sector in various urban centres.

The organisation has operations in Delhi, Jammu & Kashmir, Uttar Pradesh, and Haryana.



Figure 3: Chintan's MRF²

Initiatives

- **Inclusive EPR model:** the initiative provides informal waste workers with infrastructure to manage collected waste. The Material Recovery Facility (MRF) established under the initiative is operated by informal waste workers. Chintan collaborates with government bodies in terms of attaining the land and procurement/sale of the material.

The facility provides clean, hygienic, and mechanised working systems to improve efficiency. The waste workers are provided fixed monthly wages for the services offered and they coordinate with Delhi municipalities on procurement, segregation, and waste sales.

- **Zero waste:** the initiative works closely with various stakeholders across the plastic value chain to promote the circular economy concept. Through various research papers and handbook, Chintan reaches out to consumers and urges users to reduce their plastic footprint and change their buying behavior.
- **Waste pickers leadership building:** the initiative works directly towards identifying leaders among waste workers that can unite and represent the waste worker's community for social upliftment. Therefore, in 2001, Chintan in partnership with various informal waste workers, established Rashtriya Safai Seva Sangathan (RSSS), which was later registered as Safai Sena in 2009.

²Chintan, Chintan Environmental Research and Action Group [chintan-india.org]

Safai Sena is a registered group of waste pickers, doorstep waste collectors, itinerant and other small buyers, small junk dealers, and other types of recyclers with a common objective of generating “green jobs” for waste workers, where the work undertaken should be safe, respected, recognised and clean. Under the initiative, the waste workers are provided with workshops to build their communication skills, leadership, and knowledge to handle waste. The initiative also gives the waste workers a platform to represent themselves nationally and internationally.

- Policy advocacy with the government:** Chintan collaborates strongly with the local government, continuously advocates for informal waste worker's rights, and uplifts their livelihood. Chintan has worked extensively for the rights of the waste workers working on the landfill, especially Bhalaswa landfill, which is one of the biggest landfill in Delhi. Chintan approached District Administration and Municipal Authorities to initiate a survey of the waste workers working on the landfill to map them and push for their formalisation. As a result, more than 600 waste workers were mapped and 308 waste workers were surveyed.

Apart from the listed initiatives, Chintan also works towards providing waste workers with a training programme conducted in partnership with the Municipal Corporation of Delhi (North) where topics like social and financial security, segregation and composting, E-waste management, disaster risk reduction (delivered by the Delhi Disaster Management Agency), plastics and inclusion of wastepickers in Extended Producer Responsibility (EPR), and occupational safety & hygiene were covered.



Figure 4: Safai Sena group meeting³

Gaps addressed

- Social inclusion:** the formation of Safai Sena helped facilitate the social inclusion of the informal waste workers by creating a union of waste workers that can be represented as a waste management service-providing body. Safai Sena provides waste workers PPE equipment, ID card (facilitated by Chintan and Municipality) and authorization to work in designated areas/projects.
- Integration of waste workers:** the MRF established by Chintan directly onboards the waste workers to work on the payroll of the project. Hence, providing waste workers with a secure source of income and recognition.
- Access to infrastructure:** although the MRF provided by Chintan is not of large capacity or present in multiple locations, it still provides waste workers with a designated facility to collect and segregate the waste.
- Capacity-building:** the organisation works towards capacity building for informal waste workers and spreading awareness amongst other relevant stakeholders involved in the plastics value chain by promoting the principles of circular economy.

³Safai Sena Facebook Page, <https://www.facebook.com/safaisena2009/photos>

Organisation overview

Recykal is an end-to-end waste management service provider established in 2016. They strive towards creating a digital ecosystem for waste tracking and exchange by providing digital waste commerce solutions, that connects waste generators (businesses, consumers), waste processors (aggregators, informal sector), and recyclers.

The organisation has established interfaces that help provide EPR-based traceable solutions to businesses. These interfaces generate requests for the pickup of material, trace the complete process, and help consumers get refunds for the plastic waste they return after usage.

Although the applications are very business-centric, through this digitized solution, the organisation has directly impacted the livelihood of various informal waste workers.



Figure 5: Plastic deposit refund system by Recykal⁴

Initiatives

- Digitized collection solution:** Recykal has established a system that would allow the organisation to trace and record the collected waste from various informal sector aggregators and small collectors, leading to informal sector waste workers identified and onboarded to work with Recykal in collecting the waste. As the initiative works in close collaboration with the local government, the onboarded waste workers are identified as Safai Sathi and receive a government-authorized identity/working card to operate.
 - Regularised wages for waste workers:** the DRS system works on the principle of providing incentives for the users to return the plastic bottles purchased by them instead of dumping them in nature. Under the initiative, the water bottle retailer takes a security amount additional to the maximum retail price (MRP), which is returned once the empty bottle is deposited at the authorised take-back centers.
- There are still cases where individual consumers do not return the waste. Therefore, the waste workers collect the plastic bottles and return them to authorised take-back centers that would provide the waste workers with the same regularized rate set by the take-back center.

⁴Recykal, <https://recykal.com/deposit-refund-system/>

Gaps addressed

- **Access to infrastructure:** Recykal provides waste workers with digital infrastructure to use mobile-based services for connecting with potential buyers for the collected and segregated waste.
- **Engagement with government:** as the project runs in collaboration with the local government body, the waste workers are linked with the government and are registered as government on-boarded service providers.



Hasiru Dala Innovations and Hasiru Dala Not for profit

Organisation overview

Hasiru Dala, which means “Green Force”, is a social impact organisation that works with waste pickers and other waste workers to ensure a life with dignity. The organisation also has a not-for-loss social enterprise named Hasiru Dala Innovations Private Limited which is focused on fostering entrepreneurship and creating better livelihoods for waste-pickers through inclusive businesses that have an environmental impact.

Hasiru Dala works towards ensuring social justice by advocating for identity rights, providing education

for children, providing healthcare & housing for the family, building financial literacy & inclusion, providing leadership training, and policy advocacy for integration & inclusion.

At the same time, Hasiru Dala Innovations Private Limited works towards economic justice by acting as professional service providers for waste management, providing access to markets, and entrepreneurship opportunities, creating predictable livelihoods, and ensuring better working conditions.



Figure 6: Waste workers working with Hasirudala⁵

Initiatives

- **Resource organisation of dry waste collection centres (DWCC) and Plastic Recovery Facility (PRF):** Bangalore is one of the only cities in India with an extensive decentralised waste management infrastructure in the form of DWCC and PRF. Each ward in the city has a DWCC established by the government and operated by wastepickers enterprise.

Hasiru Dala Innovations supports establishing the waste-pickers enterprise that would sign the Memorandum of Understanding (MOU) with the local Municipality to operate the facility independently.

- **Decentralised waste pickers franchise model:** this initiative creates alternative earning sources for waste workers on a contractual basis. Under the initiative, Hasiru Dala

⁵Hasiru Dala, Social Security - Hasiru Dala

collaborates with various bulk generators on a pay-as-you-throw model, where the bulk generator can raise requests for waste collection when they want to dispose of waste in bulk. Hasiru Dala would coordinate with waste pickers to collect and transport the waste from the bulk generator, which they can sell to authorised recyclers. The revenue generated is designated with the waste pickers enterprise.

- **Event waste management:** Hasiru Dala also collaborates with various individual consumers and government bodies to provide exclusive waste management services to individual events

such as weddings, social gatherings, or large gatherings such as sports matches. Hasiru Dala would coordinate with waste pickers to collect waste from these events resulting in additional sources of income and boosting their financial independence.

- **Bottles to buttons:** this is a CSR initiative of H&M in collaboration with Hasiru Dala, where a particular type of plastic waste is collected, segregated, and processed by Hasiru Dala, which is then sent to an authorised recycler to be made into buttons to be used by H&M into their fashion line-up.

Gaps addressed

- **Integration of waste workers:** Hasiru Dala works towards an integration model that enables the creation of entrepreneurs out of the waste workers by creating waste pickers enterprises that work on a contractual basis with Hasiru Dala Innovations and Bangalore Municipality.
- **Government collaboration:** through the collaboration with Bangalore municipality, Hasiru Dala allows waste workers to collaborate with the government as individual service providers without taking away their right over the waste collected.
- **Capacity-building:** the organisation understands that the waste workers are already the subject matter experts when it comes to waste management. Still, they need capacity building in terms of social and economic literacy. Therefore, Hasiru Dala not-for-profit runs various programs to build the informal waste sector's financial literacy and make them aware of their social rights. The not-for-profit also runs various other programmes that work towards providing leadership training and advocating for informal waste worker recognition.

Social Lab Environmental Solutions Pvt. Ltd.

Organisation overview

Social Lab Environmental Solutions Pvt. Ltd. (Social Lab) is a waste management company working towards creating people-centric waste management solutions. The organisation's focus is transforming the existing linear waste management system into a circular one.

They have worked in 20 cities on Solid Waste Management (SWM) and with 70+ cities on Plastic Waste Management (PWM). Through their efforts, Social Lab has diverted 40,000 tonnes of plastic

waste from landfills under the Extended Producer Responsibility (EPR) mandate.

In terms of engaging with the informal waste workers, Social Lab, through its collaboration with the Pune Municipality Corporation, has increased user fees for primary waste collection, resulting in Pune Municipal Corporation saving money on primary waste collection. Social Lab also has established an MRF facility for resource recovery from dry waste, where they have integrated the informal waste workers to get trained and operate the plant.



Figure 7: Waste workers working with Social Lab⁶

Initiatives

- Paid user for primary collection:** Pune Municipal Corporation has been concerned regarding waste management in the areas of a large population. To address the concern, the 'Garbage-Free Wadarwadi' pilot project was launched in the light of the Swachh Bharat Abhiyan in 2015. The project aimed to attain 100% door-to-door collection, increase segregation at source, capacity building of the citizens, and remove chronic garbage spots.

Under the project, Social Lab, along with Pune Municipal Corporation and Pune Platform for Collaboration Response (PPCR), worked towards regularising the waste pickers, mapping the collection areas, connecting with every household for collection, organise social gatherings and meetings to do capacity building, organise a weekly meeting with waste pickers, and continuously monitor each household.

⁶Social Lab Environment Solution Pvt. Ltd., <https://social-lab.in/epr/swm-services/>

As a result of this initiative, the number of households from where the waste was collected increased from 653 to 1693, source segregation increased by 55%, accumulation of waste from chronic spots was reduced by 65%, and about 53,845 INR additional incomes were generated for eleven waste pickers.

- **Integration of waste pickers at the MRF plant:** a 10 tonnes/day MRF plant has been established where 43 waste pickers have been employed to operate the plant, consisting of 34 female workers and nine male workers. Each waste picker has been subjected to an onboarding and capacity-building process. The MRF has ensured a better workplace and maximum resource recovery.

Gaps addressed

- **Government collaboration:** the waste workers onboarded are in partnership with the Pune municipality, allowing them to work as government-authorized waste workers and providing them with ID cards.
- **Capacity-building:** the waste workers onboarded to work in the MRF facility are trained to operate the plant, providing them with on-the-job training and practical knowledge.
- **Regularised wages for waste workers:** apart from being paid a monthly salary, waste workers, who have been onboarded in the MRF, have received life insurance worth 2,00,000/- INR, along with an average monthly income increased from 8400/- to 13,604/- INR.
- **Access to infrastructure:** Social Lab is ensuring that a better workplace for the waste workers is provided either through the MRF or through the partnership with the Municipality.





Case study 6

Alliance of Indian Waste Pickers

Organisation overview

The Alliance of Indian Waste Pickers is a decade-old national network of waste-pickers organizations, cooperatives, self-help groups, and trade unions. The Alliance has connected with more than 1,00,000 wastepickers and informal waste collectors through its member organization.

Founded in 2008, the Alliance of Indian Waste Pickers (AIWP) was established by four organizations working on the issues of waste pickers: Kagad Kach Patra Kashtakari Panchayat (KKPKP), Chintan, Self Employed Women's Association (SEWA) and Stree Mukti Sanghatana (SMS). These organizations allied to ensure that the collective voice of waste pickers is represented on the national public agenda.

As an organization representing waste pickers, AIWP has been actively advocating the cause of waste pickers by training member organizations, developing policy analysis and recommendations, generating research studies, and organizing wastepickers in India.

As a result of the work done by the Alliance, wastepickers and informal waste collectors have finally been incorporated into the Solid Waste

Management rules in 2016. Apart from that, some notable achievements are as follows:

- inclusion of waste-pickers and their children in Rashtriya Swasthya Bima Yojna
- scholarships for Children Engaged in Unclean Occupation and various training programs of National Safai Karmachari Finance & Development Corporation (NSKFDC) and Central Institute of Plastic Engineering and Technology (CIPET)
- they are invited as experts for the training of municipal officials by the National Institute of Urban Affairs (think tank of the Union Ministry of Housing and Urban Affairs). More than 1100 municipal officials participated in these training sessions across India. Many of the members of the Alliance are recognized as resource persons by various municipal, state, and national training agencies
- represented Indian waste-pickers in the Conference of Parties (COP) of the United Nations Framework Convention on Climate Change (UNFCCC) and UN-Habitat meetings



Figure 8: The Alliance of Indian Wastepickers (AIWP)⁷

⁷The Alliance of Indian Wastepickers (AIW), <https://aiw.globalrec.org/>

Initiatives

- **Policy analysis and recommending policy measures to all levels of government:** since 2015, the Alliance has been following the solid waste management rules, plastic waste management rules, and other waste rules from inception till execution and has continuously provided inputs for the informal sector uplifting.
- **National database of waste pickers:** the Alliance is setting up a database for the 1,00,000 wastepickers and waste collectors to track, register and provide relief to the waste workers, when needed. Through this database, waste workers benefit from social welfare programs, evidence-based decision making for areas of focus, and capacity building.
- **Social audit of Indian EPR:** in light of the recent EPR regulation launched in 2022, the Alliance connected with various stakeholders to understand the challenges of integrating the informal waste workers with the formal waste management system through EPR.
- **We Speak Too - In collaboration with Indian Institute for Human Settlements:** this initiative aims to forge a connection between the citizens and the waste workers. A panel of workers engage with the residents, sharing their concerns and building a wider coalition with citizens who would reach out to the government for informal waste worker inclusion.
- **Capacity building of member organizations and municipal authorities to facilitate the integration of waste pickers:** member organisations are actively trained on extending social entitlement, financial literacy, etc., to the waste workers. The Alliance has been supported by NSKFDC for undertaking capacity building.

Apart from the waste workers, municipal corporations were also engaged through the support of the National Institute of Urban Affairs, where the Alliance has been participating as a facilitator for the awareness programmes organised by them.

Gaps addressed

- **Capacity building of other stakeholders:** as the Alliance is a consortium of various waste management organisations that are directly working with the informal waste workers, they work towards building the capacity of member organisations so that the benefits of those training can be trickled down to the waste workers associated with them.
- **Social inclusion:** the Alliance enables waste workers to keep their voices in front of a larger audience and helps them access their social benefits. Through the efforts of the Alliance, informal waste workers have been recognised in the recent plastic waste management rules 2022.



Case study 7

Saahas Waste Management Pvt. Ltd.

Organisation overview

Saahas Zero Waste (SZW) is a socio- environmental enterprise providing end-to-end waste management services in waste collection, preprocessing, and transportation.

They have about 20+ years of experience in waste management, resource recovery, and social impact. SZW is a Private Limited company that works with its sister wing, the Saahas NGO.

Through their initiatives, SZW provides services to corporates in fulfilling their EPR compliance through engaging with their collection and return processes with the informal waste sector and incorporating the waste workers into their operations.

The SZW operates in 40+ locations across India, managing about 100+ MT/day of municipal solid waste.

SZW has developed a Social Inclusion Framework that is implemented through three programs: Micro-Entrepreneur Program, Aggregator Development Program, and MRF Development Program. These programs collectively work towards creating a methodology for scaling the project, developing the financial network, and creating a self-sustaining business model.



Figure 9: Saahas Waste Management representative interacting with informal waste worker⁸

⁸Saahas Waste Management, <https://saahaszerowaste.com/>

Initiatives

- **Infrastructure development:** the initiative provides decentralised waste management infrastructure, which informal waste workers operate. SZW establishes waste management facilities and provides necessary material handling equipment, fire safety equipment, data capturing system, and other required infrastructural support. In addition, SZW also provides the workers with Social security and occupational safety that are part of the facility.
- **Capacity-building:** SZW, to build the capacity, works towards providing waste workers with training and support on business development, entrepreneur development, EHS, health checkups and insurance, financial inclusion and bookkeeping, labour and environmental compliance, and responsible waste management practices.
- **Self-sustaining business models:** to integrate the informal sector into the formal waste management system, SZW develops self-sustaining business models through long-term partnerships with waste workers that maximise revenue from the sale of waste and additionally, facilitating a viable business case through additional revenue streams, i.e., user fees, EPR service fee, ethical sourcing surcharge, incentives for plastics recovery (plastic credit, ocean-bound plastic, etc.)

Gaps addressed

- **Secure and regularised employment:** the complete model of SZW relies on creating self-sustaining businesses and entrepreneurs out of the informal sector workers. This gives the waste workers an opportunity to be entrepreneurs, creating a sense of pride and an opportunity for secure and regularised employment.
- **Access to infrastructure:** by setting up the waste management facilities and providing relevant infrastructure to operate the facility, SZW is providing waste workers with a hygienic and one-of-its-kind workplace.
- **Employment Opportunities through a partnership with the private and public sectors:** SZW creates partnership opportunities for waste workers to partner with public and private sectors in return for waste management services.
- **Capacity-building:** SZW provides waste workers with business running and operating skills and other relevant skills required to be self-sufficient and run the facility independently.



Case study 8

SWaCH

Organisation overview

SWaCH is a wholly-owned cooperative of self-employed waste collectors and other urban poor that provides front-end waste management services to the citizens of Pune.

The corporative has about 30 years of experience engaging with the informal sector and advocating for the rights of informal waste workers. The model started in 1993 as Kagad Kach Patra Kashtakari Panchayat (KKPKP), a waste picker trade union that assessed the informal sector working in the Municipality of Pune.

SWaCH cooperative was formed in 2007 from an agreement between Pune Municipal Corporation (PMC) and KKPKP. SWaCH cooperative engages with the waste workers in mobilizing, organizing, and identifying the waste workers advocating for waste worker benefits, strengthening the sector, and building their capacity.



Initiatives

SWaCH model does not have multiple initiatives. Their mode of operation is to work with the Municipality and bridge the gaps in the current waste management system. This results in incorporating informal waste workers into the formal waste management system. Following is the working model for SWaCH:

- waste pickers are mobilised to collect waste from the doorsteps of citizens in a non-motorised manner
- most of the waste is segregated at the source
- waste workers collect user fees from citizens, which the PMC fixes
- SWaCH cooperative provides composting services in society and residential complexes to manage wet waste
- waste pickers have the right to sell the collected waste to scrap or retain the entire amount
- non-recyclable waste is handed over to PMC for management
- PMC provides the infrastructure to collect and segregate the waste
- PMC provides an additional subsidy for the doorstep collection of waste from the urban slums of Pune

Gaps addressed

- **Secure and regularised employment:** the payment model adopted under SWaCH is a user-fees and scrap income model the government authorises. This government- backed model takes tipping fees from the waste generators, which are provided directly to the waste pickers as earnings. This has increased waste workers' monthly average income from 5,000 INR to 23,000 INR.
- **Access to infrastructure:** partnership with the municipal body has ensured that the waste workers have the infrastructure to bring the collected and sorted waste for storage.
- **Employment opportunities through partnership with public sectors:** SWaCH actively collaborates with the municipal body. Through that collaboration, Pune municipality has saved 60,000 INR per annum on collection and transportation costs along with eight lakhs metric tonnes of CO₂ equivalent avoided and use of 34 Cr liter of fuel consumption avoided.

Similarly, for the waste workers, apart from being supported by the government, they were provided with social welfare benefits such as children's education, health care subsidies, schemes, life, accidental insurance, etc.



Case study 9

Stree Mukti Sanghatana

Organisation overview

Established in 1975, Stree Mukti Sanghatana (SMS) is a non-governmental organisation working towards women's empowerment, concentrating its efforts on creating awareness about women's issues and empowering their lives through working opportunities, education, healthcare, etc.

SMS started working with women waste workers in 1998, and they operate in the regions of Pune and Mumbai. The initial engagement model with the informal waste workers was to create self-help groups and trade unions. Later, they started creating small cooperatives out of the self-help group to promote a self-sustaining business model.



Initiatives

SMS has run various small and large initiatives, including:

- **Policy advocacy:** they have been advocating for the inclusion of informal women waste workers through ration cards. Apart from official recognition, SMS created a federation of women's self-help groups that partnered with the Pune Municipality to manage waste. As a result, Pune municipality provided the federation with a dry waste collection center (DWC) exclusively for women to operate. A cooperative of women waste workers named Amla Cooperative was also created by SMS in 2004, securing cleaning contracts from the Pune Municipality.
- **Infrastructure:** Stree Mukti Sanghatana was provided with training and infrastructure to manage wet waste. Now, through their knowledge and experience, they have been able to establish four biogas plants and process 23 tonnes of wet waste per day. The plant is maintained and operated by Stree Mukti Sanghatana.
- They have also created a small-scale 11 dry waste center in Mumbai Navi Mumbai and Thane, where they collect 30 tonnes of dry waste daily.
- **Awareness:** source segregation is regarded as one of the biggest challenges for waste management. Therefore, Stree Mukti Sanghatana has been running campaigns in 29 colleges and among citizens through street play, books, posters, exhibitions, etc., to spread awareness around source segregation.

- **Training and capacity-building:** training waste workers is essential to integrate informal sector workers into the formal waste management system. Therefore, through sessions and workshops, Stree Mukti Sanghatna, works towards providing training on dry and wet waste management to waste workers across India.
- **Zero Waste Project:** the concept revolves around the complete utilization of waste by

reusing and recycling, where only a minimal quantity of residual waste is generated. This project involves both awareness creation and infrastructure development. Until now, Stree Mukti Sanghatna has been able to engage with 100 housing societies under this project. One successful example of this project is the Zero Waste Project at Anushakti Nagar, Mumbai, where 10000 families were engaged daily, with seven tonnes of wet waste and approximately 25 tonnes of dry waste collected.

Gaps addressed

- **Secure and regularised employment:** the primary objective of the Stree Mukti Sanghatna is to ensure regularised secure employment to below-poverty-line informal women waste workers. They have raised funds for over 3000 women waste workers in Pune through their initiative.
- **Access to infrastructure:** partnership with the Pune municipal body has ensured that women waste workers have the exclusive infrastructure to bring collected and sorted waste for storage. This has resulted in 11 small-scale dry waste collection centers and four biogas plants exclusively operated by women waste workers.
- **Training and capacity-building of waste workers and other stakeholders:** Stree Mukti Sanghatna conducted a survey of below-poverty-line women in famine-stricken areas of Maharashtra, Karnataka, and Tamil Nadu to reveal the problems leading to discrimination against women waste workers.

Then the program worked towards addressing waste management problems through awareness, training, and self-reliance amongst the women waste workers and empowering them to be their own leaders.

Stree Mukti Sanghatna has worked extensively towards building awareness around source segregation and reuse of material to assist in more effective waste management by the waste workers.

- **Social inclusion:** Stree Mukti Sanghatna, through its initiatives, has been working towards creating awareness about women's issues and empowering their lives through the provision of working opportunities, education, healthcare, etc. This has led to women, associated with the movement, being accepted in society as a major working force.

There still are challenges that need to be addressed, such as gender bias and gender stereotypes within the recycling industry and apathy toward people with low incomes, that Stree Mukti Sanghatna plans to address going ahead.

Waste Warriors Society

Organisation overview

They started in 2012 with the vision of waste management and uplifting grassroots-level waste workers. Waste Warriors Society (Waste Warriors) started working on an inclusive, participatory, and sustainable solution for waste management in the eco-sensitive Indian Himalayan region. Waste Warrior has its presence in Dehradun, Uttarakhand, Shastradhara, Corbet, Mussori, Dharamshala, Bir, and Kasauli, where activities range from operating dry and wet waste material recovery facilities to rural and urban community engagement.

Through their initiatives, Waste Warrior Society provides awareness to the consumers, advocates for setting up waste management infrastructure in rural India, and setting up and deploying fully operational waste banks and MRF facilities. Apart from that, they also provide capacity building to the waste workers to operate the facility and ensure financial sustainability for the waste workers.

Through their initiatives, Waste Warriors have been able to work with 1000+ waste workers, managing nearly 6000+ metric tonnes of waste, and have an engagement footprint of about 2,00,000+ people directly.



Initiatives

- **Formalising the informal sector – Waste Warriors’ green workers:** under the initiative, the waste workers’ capacity is built to work in a formalized waste management ecosystem. The trained waste workers are then employed as vehicle operators for door-to-door waste collection, IEC and community engagement, and Material Recovery Facility (MRF) operations.

Along with that, Waste Warriors ensure that waste workers are provided with ID cards that ensure recognition in society and local government body.

- **Breaking the taboo and stereotypes – Our Paryavaran Sakhis:** Waste Warriors created Paryavaran Sakhis (Female Friends of the Environment) in Corbett Tiger Reserve.

These Paryavaran Sakhis are women-led and women-run Self Help Groups (SHGs), where

women work as e-vehicle drivers to collect waste and spread awareness at door-to-door and community levels. The Paryavaran Sakhis earn their livelihoods through user fee collection, the sale of recyclables, and gap funding.

Supporting the informal waste workers – innovative campaigns: under this initiative, Waste Warriors create working opportunities in return for food grains.

The initiative is called Plastic Laao, Rashaan Paa, where they encourage people from the informal waste sector to collect and bring any plastic (LVP, MLP, etc.) and exchange it for ration kits. Through this initiative, Waste Warrior also started building the capacity of the waste workers, making them aware of their rights, mapping the waste workers and, distributing their ID cards, providing them with basic necessities to live through the lockdown.

Gaps addressed

- **Secure and regularised employment:** the workers trained by the Waste Warriors are incorporated into the operations of the organisations, ensuring that the workers are provided fair and regularized income. For the waste workers that are not on board, Waste Warriors try and create opportunities for the waste workers to engage with the Municipality to earn regularized income.
- **Access to infrastructure:** Waste Warriors work towards providing infrastructure that the waste workers can operate. Currently, they have four tonnes per day (TPD) (dry) and one TPD (wet) waste MRF running in Dehradun. But, they plan to expand their scope and open more decentralized MRFs to make them available for the waste workers to operate.
- **Capacity building:** the waste workers are provided capacity building for basic skills to work as formalized workers, making them aware of their legal rights and entitlements.
- **Social inclusion:** the campaign run by Waste Warriors is heavily reliant on improving the public perception of waste workers so that society views them as professionals instead of casting them out of the social strata.



Case study 11 ReCircle

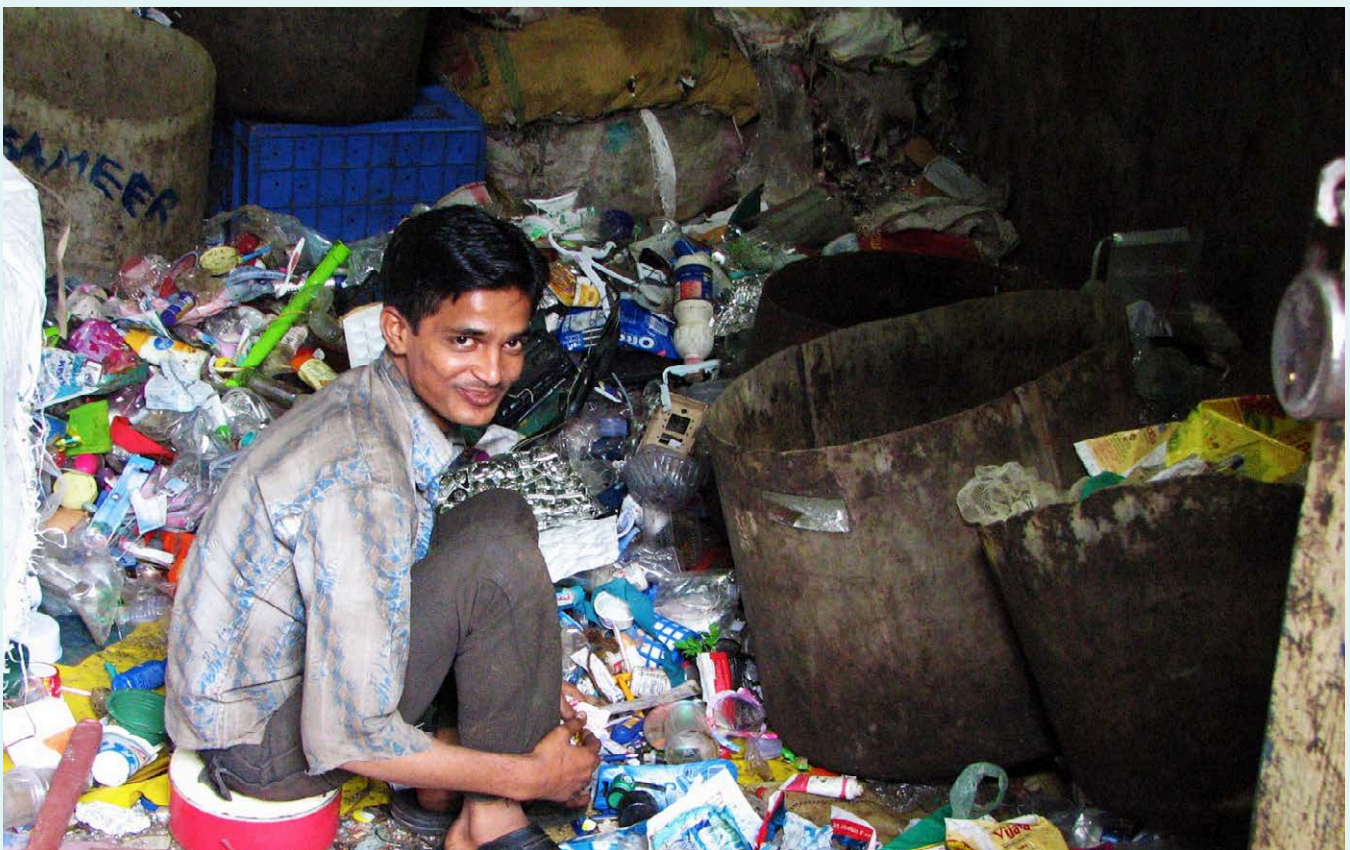
Organisation overview

ReCircle is a resource recovery enterprise working towards a sustainable future by preventing resources from entering landfills and oceans and directing the waste back into the economy for recycling, reusing, or repurposing. The organisation's journey started in late 2015 with the name of Raddi Connect, which was recently rebranded to ReCircle.

ReCircle enables businesses to take action to stop plastic pollution & meet Sustainable Development Goals (SDGs) primarily through

offsetting their plastic footprint and meeting the regulatory compliance of the EPR or through ensuring that the recycled material is put back into the ecosystem. This collectively works towards creating a traceable reverse supply chain.

The organisation's vision is to create an ethical circularity system that would also ensure ethical sourcing without exploiting the people working at the grassroots level. That is where ReCircle connects with the informal sector, ensuring that the incentives created out of closing the loop can be transferred to the informal sector.



Initiatives

- **Scale 100:** the initiative works towards increasing the processing capacity of the current MRF by 100 tons and providing better working conditions for Safai Saathis onboard Recircle. Recircle plans to replicate the initiative in other parts of the country.
- **Digitizing urban solutions:** the initiative is working towards digitizing the plastic waste supply chain in India, ensuring greater transparency in the supply chain and better integration of the informal sector workers in the formal ecosystem.
- **Plastic waste management program:** this initiative was jointly developed with UNDO and HUL. Under the initiative, Recircle identified and onboarded more than 1000 Safai Saathis, ensuring that the waste workers can get relevant social security measures in place.
- **Sort karo:** the initiative was an awareness program where Recircle asked households to start source segregating so that the waste collected has greater value for the waste workers.
- **Plastic safari:** similar to Sort Karo, the Plastic Safari initiative was targeted towards the younger generation, who are taught to develop the habit of source segregation at the school level as an essential skill.

Gaps addressed

- **Secure and regularised employment:** the workers are onboarded as Safai Sathis and are referred to as authorised waste collectors, which enables the workers to get regularised and secure salaries every month.
- **Access to infrastructure:** the MRF established by Recircle serves as the solution for the waste workers to come and deposit their waste for processing. Also, Recircle strives towards providing the best working conditions to the Safai Sathis employed in the MRF.
- **Social inclusion:** through the campaigns, waste workers are mapped and identified so that they can be provided with relevant ID cards, which helps them be recognised as authorised waste workers rather than kabaddi walas.
- **Capacity-building of other stakeholders:** apart from building the capacity of the waste workers, Recircle works towards actively promoting source segregation amongst the citizen, making the job of waste workers easy.



Conclusions

The informal waste sector in India is extremely diverse, with entirely different modes of operations depending on the geography they exist in. Therefore, finding a universal solution to facilitate the integration of the informal sector into the formal ecosystem is impossible. The most appropriate method would be to set principles that would result in a harmonious integration of operations without taking away the livelihood of the informal sector workers.

The objective of this document was to document and understand the various initiatives adopted by different organisations in different geographies for integrating with the formal waste management system or uplifting the informal sector.

The document is not an accurate representation of all the initiatives undertaken in the nation. Although, based on the observations made from the case studies presented by the members at the platform of India Plastics Pact, it was observed that the most common practice adopted by the organisations to work towards integrating or uplifting the informal waste sector are:

- provide infrastructural solutions such as MRFs and dry waste collection centers where waste workers can be employed, or they can manage it

- hiring waste workers as employees or designated service providers with the organisation, ensures that the workers have a secure and regularized employment opportunity
- capacity building for informal waste workers in either vocational skills for operating in a more formal manner or social skills in understanding their rights

Additionally, it was observed that each local government has different support levels for the initiatives. Municipalities, such as Pune Municipal Corporation, have supported initiatives extensively, leading to a larger uptake of the informal sector worker integration in the formal system. However, not all organisations have been able to collaborate with the local government but acknowledge governmental collaboration as a key to further expansion of the initiatives.

Identifying informal waste workers as employed individuals by the consumers and the ability to attain the benefits of the government schemes by the waste workers is primarily acknowledged as the benchmark for social inclusion. Alternatively, informal waste workers being able to run an individual waste management business in harmony with the formal waste management system is not a widely adopted idea, with only a few organisations working towards that.

Source segregation of waste and tipping fees has been viewed as widely recognised enablers toward making the lives of the informal waste workers easier and also increasing the monetary benefits derived by the informal sector from waste management practices. This can only be done through extensive and widespread awareness programs with the consumers and other relevant stakeholders.

Government engagement in this would be critical because legal enforcement would ensure greater practice adoption.

Therefore, key takeaways from the document would be:

- a nationwide singular solution approach would not work for a country like India
- a principle based approach would be helpful for the integration of the informal sector with the formal waste sector
- policy level interventions and government collaborations would be the key to enabling the changes
- local initiatives could be provided additional funds to upscale the operations to solve the local problems





About the India Plastics Pact

The India Plastics Pact, launched in 2021, unites businesses, governments, NGOs and citizens to create a circular plastics economy in India. It was developed by Confederation of Indian Industry (CII) and WWF India. The CII-ITC Centre of Excellence for Sustainable Development (CESD) anchors the India Plastics Pact, within CII. The initiative is supported by WRAP, a global NGO based in the UK.

Launched in September 2021, the India Plastics Pact is the first Plastics Pact in Asia. As of October 2023, there are 13 Plastics Pacts spread across the globe. 51 organizations are currently part of the India Plastics Pact. The Pact works on all plastic resins at all stages of the plastics value chain.



Confederation of Indian Industry

About Confederation of Indian Industry

The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the development of India, partnering Industry, Government, and civil society, through advisory and consultative processes. For more than 125 years, CII has been engaged in shaping India's development journey and works proactively on transforming Indian Industry's engagement in national development. CII engages closely with Government on policy issues and interfaces with thought leaders to enhance efficiency, competitiveness and business opportunities for Industry through a wide portfolio of specialized services and strategic global linkages.

India's premier business association has around 9,000 members, from the private as well as public sectors, and an indirect membership of over 300,000 enterprises from around 286 national and regional sectoral industry bodies. With 62 offices, including 10 Centres of Excellence in India, and 8 overseas offices in Australia, Egypt, Germany, Indonesia, Singapore, UAE, UK, and USA, as well as institutional partnerships with 350 counterpart organizations in 133 countries, CII serves as a reference point for Indian Industry and the international business community.



About WWF India

WWF India is committed to creating and demonstrating practical solutions that help conserve India's ecosystems and rich biodiversity. With more than 50 years of conservation journey in the country, WWF India works towards finding science-based and sustainable solutions to address challenges at the interface of development and conservation. WWF India is part of the WWF network, with offices in over 100 countries across the world. WWF India works in many states of India, through our state and field offices. The organisation works in different geographical regions and across thematic areas, including the conservation of key wildlife species and their habitats, management of rivers, wetlands and their ecosystems. On the sustainability side, the focus areas are climate change adaptation, driving sustainable solutions for business and agriculture and empowering local communities as stewards of conservation. WWF India also works in combatting illegal wildlife trade and in bringing environment education to students through outreach and awareness campaigns.



About WRAP

WRAP is a climate action NGO working around the globe to tackle the causes of the climate crisis and give the planet a sustainable future. Our vision is a thriving world in which climate change is no longer a problem. We believe that our natural resources should not be wasted and that everything we use should be re-used and recycled. We bring together and work with governments, businesses and individuals to ensure that the world's natural resources are used more sustainably. Our core purpose is to help tackle climate change and protect our planet by changing the way things are produced, consumed and disposed of. We support partner NGOs around the world to deliver real change through collaboration and progress from over 300 of the world's largest businesses. Initiatives we support include: Plastics Pacts in Chile, South Africa, Kenya and India; food waste agreements in Mexico, South Africa and Indonesia; and food waste citizen campaigns through our Love Food Hate Waste brand in Canada, Australia and New Zealand.



UKRI India

UKRI India plays a key role in enhancing the research and innovation collaboration between the UK and India. Since 2008, the UK and Indian governments, and third parties, have together invested over £330 million in co-funded research and innovation programmes.

This investment has brought about more than 258 individual projects. The projects were funded by over 15 funding agencies, bringing together more than 220 lead institutions from the UK and India. These research projects have generated more than £450 million in further funding, mainly from public bodies but also from non-profit organisations and commercial entities, attesting the relevance of these project.



INDIA PLASTICS PACT

Developed by



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This report is funded by



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