

# Solutions to **Plastic Pollution** Through Inclusive Recycling





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# Introduction

This report builds on Ocean Conservancy's [first](#) and [second](#) report on efforts to support informal sector waste collectors (ISWCs) in Colombia through the project Solutions to Plastic Pollution through Inclusive Recycling (SPPIRe). The previous reports covered the launch of the project and its first two years of activities and learnings. This report covers the project's growth and findings from its third year, 2023.

ISWCs sometimes called waste pickers or recyclers, among other terms – spend all or part of their workdays out in the community collecting items considered waste that can be recycled, to resell for an often small income. Globally, it is estimated that there are 15-20 million informal waste collectors, primarily in low-to-middle-income economies where there would be no recycling at all without their contributions. If items are not recycled or reused, they may be landfilled, burned, or leaked into the environment.

While ISWCs provide an invaluable public service, some types of plastics are often uncollected and ultimately end up in the environment. These types of plastics, known as “low-value plastics,” are plastics that are not currently collected due to properties that make them more difficult to recycle and their lack of end markets for recycling.

The SPPIRe project aims to grow the recognition of and improve the well-being of the informal waste recycling sector with the following three overarching goals:

- 1** Improve the well-being of the individual collectors (social and economic outcomes).
- 2** Find end markets for low-value plastics (plastics likely to end up in the ocean and not currently being collected) (environmental outcomes); and
- 3** Share learnings with policy makers, specifically in consideration of the informal sector within developing extended producer responsibility (EPR) systems (governance outcomes).

For Year Three of SPPIRe, Ocean Conservancy's global coordinating partner, iWrc, and the in-country implementation partner, Compromiso Empresarial para el Reciclaje (CEMPRE) in Colombia, built upon the results and experiences from previous years to work towards the project goals.

# Project Structure & Partners

SPPIRe's Year Three activities kicked off in March 2023 and ran through December 2023. To coordinate this initiative, Ocean Conservancy partnered with the Inclusive Waste Recycling Consortium (iWrc). Operating as the coordinating partner, iWrc worked closely with the in-country implementing partner: Compromiso Empresarial para el Reciclaje (CEMPRE) in Colombia.



Founded in 2009, CEMPRE Colombia is the Colombia branch of a non-governmental organization whose purpose is to strengthen waste recovery value chains and increase collection rates of post-consumer materials in Latin America. CEMPRE Colombia engages and supports communities, local informal waste collectors and other stakeholders in the waste recovery value chain to create a circular economy for materials. Through these activities, partnerships, and the capturing of data in their Knowledge Management Center, CEMPRE Colombia seeks to drive the development and sustainability of a circular economy in Colombia.

CEMPRE Colombia was key to the implementation of SPPIRe. CEMPRE's relationships with the informal sector and local stakeholders made it possible to drastically expand the participation of informal sector workers from Year One to Year Three. CEMPRE continued to implement SPPIRe in Cartagena, Santa Marta, Barranquilla, and other municipalities on the Caribbean and Buenaventura on the Pacific. The Caribbean Coast is composed of twenty-six recycler organizations and 33 warehouses (ECAs); in Buenaventura the project includes one cooperative.



iWrc is a global leader in fair trade labor practices in the waste and recycling sector. iWrc creates an environment where people, community, and businesses benefit from reducing and transforming waste into valuable resources. They eliminate individual risk factors for those who recycle in emerging markets and live on or below the poverty line – risk factors such as child labor, forced labor, and unsafe and inhumane working conditions.

iWrc's Social Assurance Framework, based on standards such as ILO, CDM, ISO, SA8000, and more, is crafted around principles of global workplace standards, mechanisms, and expert input to incrementally improve conditions.

# Overview

The Colombian government's passage of Resolution 1407 of 2018 and the publication of the National Plan for the Sustainable Management of Single-Use Plastics in 2021, signaled a serious focus on the better management of plastics, especially single-use packaging. Designed to support the transition to a circular economy and the country's recycling targets, Resolution 1407 introduced EPR for manufacturers, importers, and distributors of plastic containers and packaging and requires packaging producers to develop deposit return schemes.

The informal waste sector of Colombia is estimated to have more than 60,000 individuals who operate as a critical component of the national waste management system. Acknowledging the significant role these workers play, the government enacted Decree 596 in 2016 to support the formalization of informal cooperatives and encourage their entry into the formal economy.

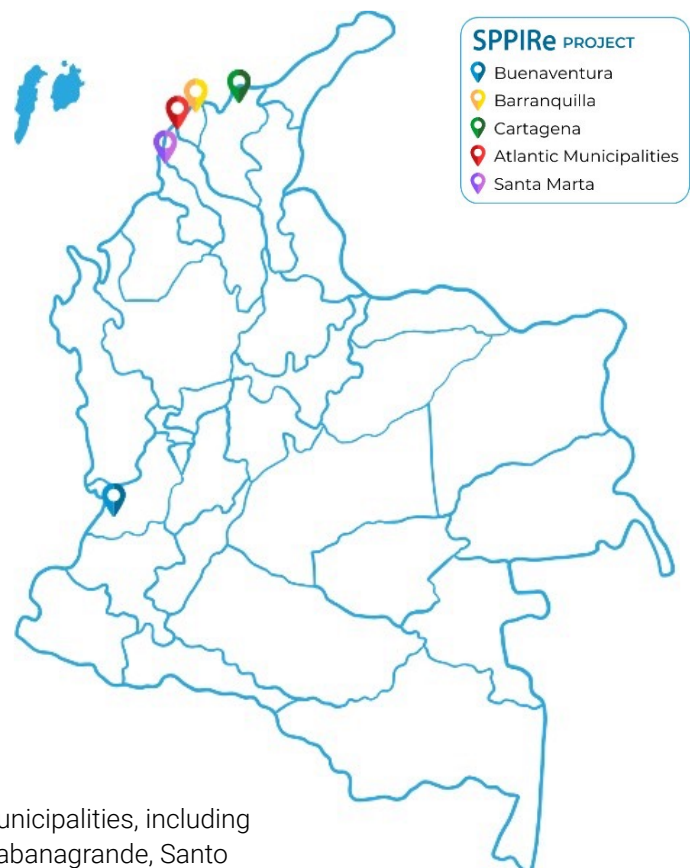
In this report, the terms "recyclers' organizations" and "cooperatives" are used interchangeably. These organizations may have employees, even if informal, or may have loosely-associated members. The term "waste collector" or "individual collector" refers to those individuals that are not employees of a recyclers' organization but may bring their collected materials to the organization to sell. The SPPIRe project works with both groups: those who participate in the trainings are usually employees or members of the recyclers' organization; the individual waste collector more often participates in iWrc University and the enhanced income portion of the project.

Building on the Year One and Year Two activities and results, CEMPRE established a Formalization Methodology, in parallel with the iWrc Social Assurance Framework, aimed at enhancing the conditions of recyclers and material management across various municipalities along the Colombian coast. The project, spanning from March to December 2023, focused on improving the value chain conditions of recyclable materials within selected cities. CEMPRE prioritized the recovery of flexibles (i.e., multilayered plastic, PE-PP flexible packaging) and colored PET.

The objectives of the Year Three program in Colombia were to continue to implement the enhanced income program developed during Year One and implemented in Year Two to increase the collection of low-value plastics, support cooperatives in the process for achieving legal formalization status by the government, and continue to focus on the well-being of cooperative members through trainings to implement the iWrc Social Assurance management system.

## Selection of Territories

Twenty-six organizations were identified across different municipalities, including Barranquilla, Cartagena, Turbaco, Santa Marta, Malambo, Sabanagrande, Santo Tomás, Palmar de Varela, Galapa, Puerto Colombia, Palomino, and Buenaventura.



## Recyclers' Organization Diagnostic

Organizations were evaluated on their operational capacities, infrastructure, and existing support systems.

## Action Plans for Recycler Organizations

Action plans were structured to address key areas essential for enhancing their operations, including:

- A Formalization:** Facilitating the formalization of recycler organizations, ensuring compliance with legal requirements, and enabling access to formal markets and government support programs.
- B Capacity Building:** Strengthening the organizational capacity of recycling groups through training programs, skill development initiatives, and knowledge sharing sessions.
- C Enhanced Income Program:** Creating enhanced income mechanisms associated with increased collection and recycling efforts, thereby reducing the amount of plastics landfilled, burned or leaked into the environment.
- D Social Assurance Framework (iWrc University):** Measuring and monitoring the outcomes generated by capacity building, ensuring that the project's initiatives aligned with the broader goal of improving livelihoods and well-being.

## Implementation

This phase involved the execution of the action plans in close collaboration with the identified recycler organizations, which included the deployment of resources, training sessions, provision of necessary equipment, and the establishment of support mechanisms to ease the execution of planned activities.

## Reporting and Monitoring

A reporting and monitoring system tracked progress, identified challenges, and ensured accountability. Regular reports were generated to document achievements, lessons learned, and areas requiring further attention.



**Within the framework of social, economic, environmental, and governance outcomes, the 2023 goals included:**

**Table 1: Theory of Change**

Goals	Indicators	Targets/Baselines
Informal waste collectors receive higher incomes and/or more financial benefits	<ul style="list-style-type: none"> <li>▶ Increased income for recyclers with low value plastic (LVP) collection</li> <li>▶ For the targeted recycler organizations to progress to step 6 out of 8 in the formalization phases (Dec 596/16)</li> </ul>	<ul style="list-style-type: none"> <li>▶ Baseline: pre-SPPIRe income and target is monthly increase</li> <li>▶ Level of formalization process is baseline establish for each co-op pre-SPPIRe</li> </ul>
Recyclers' organizations increase capacity to organize and improve working and living conditions	<ul style="list-style-type: none"> <li>▶ Percentage of ISWCs monitored are observed wearing personal protective equipment (PPE) by end of 2023 on a consistent basis (at collection points)</li> <li>▶ Level of understanding of labor rights/standards and importance of organizing</li> <li>▶ Improvement in cooperative social assurance framework assessments</li> </ul>	<ul style="list-style-type: none"> <li>▶ Improvement in at least 30% of recycler PPE usage</li> <li>▶ Improvement in understanding of labor rights and workplace standards</li> <li>▶ Co-ops show progress over baseline assessments</li> </ul>
Volume of LVP collection increases	<ul style="list-style-type: none"> <li>▶ Type and amount of plastics collected per month per cooperative</li> </ul>	<ul style="list-style-type: none"> <li>▶ Percent increase in collection of identified LVP by end of 2023</li> </ul>
Develop/strengthen supply chain to incorporate LVP into durable goods	<ul style="list-style-type: none"> <li>▶ Number and types of goods attempted/succeeding in utilization</li> <li>▶ Number of industries receiving the material for processing</li> </ul>	<ul style="list-style-type: none"> <li>▶ Number of companies willing to purchase material(s)</li> </ul>
Policy Impact: Amplify the critical role of collectors as part of the recycling value chain	<ul style="list-style-type: none"> <li>▶ Number of activities/meetings w/gov and community to share work</li> </ul>	<ul style="list-style-type: none"> <li>▶ Number policymakers including co-ops/ISWCs in policy and/or discussions</li> </ul>

**The overall expected outcomes for SPPIRe are:**

- 1** Improving the social and economic well-beings of ISWCs.
- 2** Collecting low-value plastic and development of end-markets for the material collected to reduce plastic pollution.
- 3** Integrating ISWCs into EPR or other policies/regulations and platforms.





# 2023 Implementation and Results

## Goal 1 ISWCs Receive Higher Incomes and/or More Financial Benefits

CEMPRE developed a two-pronged approach to improve the income of ISWCs and increase the collection of low-value plastics:

► **Enhanced Income Program**

The enhanced income program “Reciclando por la vida, dejamos huella” (Recycling for life, we leave a mark) offers grocery vouchers to recyclers that can be exchanged for essential needs. These vouchers are distributed when collection goals of low-value materials (glass, beverage cartons, multilayered plastic, and colored – specifically amber (yellow/orange) – PET are reached. (Table 2) The vouchers are funded by SPPIRe and two other platforms, Plataforma Pacifica and Movimento Re.

Cities/Municipalities	 Glass	 Plastic Multilayer	 Amber PET	 Beverage Carton
<b>Cartagena, Turbaco, Santa Marta, Barranquilla</b>	100 kg/month	7 kg/month	20 kg/month	15 kg/month
<b>Municipalities of the Atlantic</b>	50 kg/month	5 kg/month	5 kg/month	5 kg/month
<b>Buenaventura</b>	20 kg/month	1 kg/month	19 kg/month	1 kg/month

**Table 2: Collection goals for recyclers organizations enrolled in the enhanced income plan by city/municipality.**

► **Communication Strategy**

Given the important connection between the community and the income of the informal waste collectors, public communication is critical. CEMPRE conducted targeted media outreach both directly and through engagement with other partners and allies. They also produced targeted social media content and conducted meetings with various municipal and ministry level government officials, as well academia, civil society, and private sector actors. In these communications, CEMPRE highlighted the importance of protecting coastal ecosystems, waste separation, and supporting the informal sector workers. When waste is better separated and higher volumes of materials are collected, there is the potential for higher income.



In addition to the enhanced income program for the collection of low-value plastics, project partners continued their focus on helping formalize under decree 596/2016. Formalization leads to government payments to the cooperative, akin to a service fee for their collection efforts, resulting in an increase in income to their members. The requirements for formalization are listed below in Table 3:

**Table 3: Phases for the formalization of organizations in Colombia, Dec 596/2016**

Topic	Aspect
<b>Phase 1</b>	
<b>Registration</b>	Single Registry of providers (RUPS)
<b>Phase 2</b>	
<b>Technical</b>	Define the service area
<b>Technical</b>	Registration of transported tons
<b>Technical</b>	Registration of the tons of the service area
<b>Commercial</b>	Register of recyclable waste tons
<b>Commercial</b>	Registration of recyclable material sales invoice
<b>Technical</b>	Registration of the warehouse
<b>Technical</b>	Registration of transports
<b>Phase 3</b>	
<b>Commercial</b>	Uniform conditions for the public cleaning service (CCU)
<b>Phase 4</b>	
<b>Commercial</b>	Service Portfolio
<b>Administrative</b>	Strengthening plan
<b>Commercial</b>	User database
<b>Commercial</b>	Web page
<b>Phase 5</b>	
<b>Technical</b>	Calibration scales register
<b>Technical</b>	Supervisors and operational control systems
<b>Technical</b>	Service program
<b>Phase 6</b>	
<b>Administrative</b>	Staff by category of employment
<b>Technical</b>	Micro-collection routes
<b>Administrative</b>	Certification of labor competencies
<b>Phase 7</b>	
<b>Commercial</b>	Register of petitions, complains and resources (PQR)
<b>Technical</b>	Emergency and contingency plans
<b>Phase 8</b>	
<b>Financial</b>	Financial information
<b>Technical</b>	Map of the service area in MAGNA-SIRGAS reference system



## Goal One Results

### Increased income for recyclers/collectors due to collection of low-value plastics

- ▶ The SPPIRe enhanced income program, which provided food vouchers for collected low-value plastics, reached a total of 939 registered recyclers.
- ▶ 8,610 vouchers were delivered over 10 months.
- ▶ 71% of the recyclers who received vouchers in Buenaventura (Pacific Coast) were women.
- ▶ Across all geographies, 34% were women (320) and 66% men (619).
- ▶ The average income of a waster picker in Colombia is approximately USD \$63 per month. The value of the monthly enhanced income was USD \$9 per recycler. This represents an average of 14% in increased income per month.

### The targeted recycler organizations progress to step 6 out of 8 in the formalization phases (Dec596/16)

- ▶ In 2022, all 26 cooperatives that were part of the program entered into the 8-stage pathway process. In 2023, all but two cooperatives remained in the process and two new cooperatives enrolled in the program.
- ▶ Of the 26 cooperatives, 18 are above stage 6; 6 are in stage 5; and 2 are in stage 3.
- ▶ During 2023, CEMPRE provided 303 hours of guidance to nine organizations that requested additional support, working collaboratively with iWrc.

## Analysis of Goal One Results

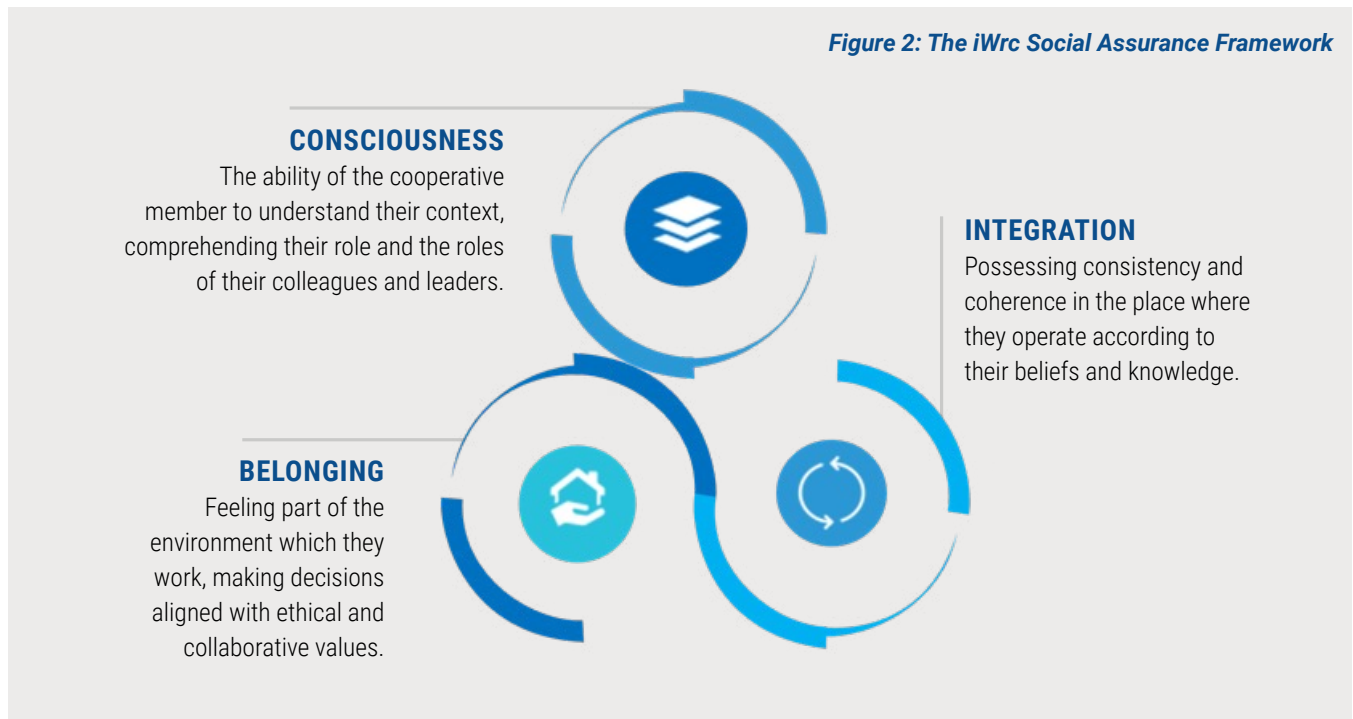
Providing an opportunity for collectors to enhance their income by collecting additional types of plastics, particularly plastics that are common (multilayered) and easy to identify (amber PET), has allowed over 900 individuals to increase their total livelihoods benefits by an average of 14%. The income is paid out through a grocery voucher, which allows for ease of distribution, as not all informal sector waste collectors have bank accounts. As mentioned above, communication strategies to raise awareness within the community about the project, the need to separate all recyclables for ease of collection, and the important role of the collectors, helps make the collectors' work in the community more efficient.

Regarding formalization of recyclers' organizations, this government initiative offers an 8-stage pathway for the informal sector to take part in municipal waste management efforts while receiving a subsidy for their efforts. Before SPPIRe and other efforts by CEMPRE, none of the cooperatives that the project engages had been able to complete the 8-stage process and most had not yet begun it. Now, nearly all the cooperatives are in the 8-stage process.

At their request, CEMPRE assisted nine of the cooperatives with the formalization process, including consulting, assistance in training specific to the formalization process, and financial support. The remaining recyclers' organizations are continuing to work through the process without additional support.

# Goal 2 Recyclers' Organizations Increase Capacity to Organize and Improve Working and Living Conditions.

For the SPPIRe project, iWrc provided virtual and in-person trainings to build capacity using the Social Assurance Framework (Figure 2), which includes the following three values within workplaces responsible for solid waste recycling: Consciousness, Belonging and Integration.



iWrc worked with the recycler organizations and informal sector waste collectors to teach them how to incorporate the Social Assurance Framework into their daily practices, based on international standards such as the International Labor Organization (ILO), Clean Development Mechanism (CDM), International Organization for Standards (ISO), SA8000 Standard,<sup>1</sup> and others. The Social Assurance Framework is calibrated to support organizations going through the formalization process. The focus was specifically on production practices, preventing child labor, preventing forced labor, health and safety, fair trade, risk identification, and corrective actions.

iWrc provided training for both CEMPRE Colombia staff and to the collectors utilizing iWrc University (described below) and other tools. iWrc also evaluated and established baselines with each of the recyclers' organizations on social and labor topics and then created customized development plans to conduct training and capacity building both on-site and virtually to help elevate the credentials of the cooperatives. Interim and follow-up assessments were conducted to measure progress. (See Table 4 for the rating system). Because iWrc rolled out its digital University in 2023, four organizations participated in the pilot version of this effort, with evaluations conducted at the end of the year.

<sup>1</sup>The SA8000 Standard is based on internationally recognized standards of decent work, including the Universal Declaration of Human Rights, ILO conventions, and national laws. SA8000 applies a management-system approach to social performance and emphasizes continual improvement – not checklist-style auditing.

**Table 4: Management System Categories**

Rating	Performance	Criteria	ISWCs in cooperative familiar with sounds
5	<b>Fully Developed</b>	Sustained focus and knowledge on management systems and continually improves the system through leadership, commitment and participation by all levels of the organization.	<b>80-100%</b>
4	<b>Satisfactory</b>	Has a relatively above-average knowledge and compliance with management systems. Is working to develop participation from all levels and functions of the organization.	<b>60-80%</b>
3	<b>Adequate</b>	Meets the minimum threshold for knowledge and compliance with management systems. Has demonstrated ability and willingness to establish, implement, and maintain compliance.	<b>40-60%</b>
2	<b>Poor</b>	Barely has knowledge of or compliance with management systems. Only shows negligible to minimal effort to maintain or increase compliance.	<b>20-40%</b>
1	<b>Very Poor</b>	No working knowledge of nor compliance on any level with management systems. Is not working towards establishing, implementing, or maintaining any change in the system.	<b>0-20%</b>
<b>How to interpret a social assurance score:</b>			
<p>If an organization has a management system score of 2.5 for health and safety, then that means that between 20-40% of the organization’s members have a working knowledge of relevant issues or do comply with the standards required for compliance and best practices. While the organization is trending towards meeting the baseline for compliance, it has not yet reached full compliance with internationally recognized standards for health and safety; it needs to work on identifying and assessing the risks posed to themselves for not complying, and it needs to identify corrective and preventative actions that the organization commits to implementing.</p>			

### **iWrc University Platform Rollout in Colombia**

iWrc incorporated its Social Assurance Framework into a digital platform called iWrc University. iWrc University is a digital learning management platform that builds capacity of waste pickers and recycler organizations to strengthen their management systems. The implementation of the Social Assurance Framework is based on waste workers growing their competencies and skills so they are better equipped to identify, measure, and mitigate the heightened regulatory and reputational risks faced by companies that are looking to source materials ethically from emerging markets as part of their social impact and/or sustainability efforts.

The transition from primarily in-person trainings to digital trainings via the iWrc University began in September 2023, and was piloted with four cooperatives: Coarpoz, Coreciclarec, Cartagena Amigable, and Asogesampa. This pilot rolled out a dynamic virtual training platform with a focus on potential limitations that might be faced during virtual training. The pilot was expanded later in 2023, to include Asorescatar, Asorevivir, Fenaciclár, Natura and Asoreko, for a total in-person training reach of 9 out of the 26 recycler organizations in the SPPIRe program. During the extended pilot program, 89% of the recycler organizations’ participants completed the courses, meeting the required certification standard.

Thus far, the assessment of iWrc University on the participants' social and professional well-being are highlighted in the below feedback (translated from Spanish):

*"My experience with the Recycling University has been excellent, we have learned many things and everything we learn we implement in the organization."*

**~ Yina Rebolledo, CORECYCLAREC**

*"It's important for us to know about these issues because they help us work safer."*

**~ Kervin Arias, Cartagena Friendly Collection Center, Cartagena**

*"I feel very proud because I have been able to complete the modules and I thought I couldn't; these trainings help me to be better at my job."*

**~ Manuel Muñoz, CORECICLAREC**

*"In Buenaventura, we have a lot of problems with internet accessibility, but we have found a way to carry out the iWrc University training in groups and by completing modules in each session. We enjoy it a lot because we feel that we work and learn as a team. The health and safety module updated us on the knowledge we need to have in order to comply with the country's local requirements."*

**~ Lizeth Salas – Asogesampa, Buenaventura**

*"We have never had training that was so simple to understand and in such a short time. The iWrc University reminds us of all the concepts of risk identification and safety at work. I really liked the summary of the class and I keep it on my phone to watch it from time to time."*

**~ Misael Anaya, Asorescatar, Barranquilla**

In parallel to the rollout of the iWrc University in 2023, progress was made implementing a plan for the iWrc Social Assurance Framework adapted to the Colombian market for SPPIRe participants. All cooperatives were reevaluated with the Social Assurance assessment and an Action Plan was defined. The assessment tool was adjusted to be in compliance with national legislation occupational health and safety standards.

Action Plans included training and capacity building tools to prevent child and forced labor, respond to emergencies, and to promote health and safety, occupational hygiene, and management. Action Plans also established a timeline and criteria to assess resources and consider an investment plan to support the cooperatives, such as with uniforms, software, and equipment, provided by a pool of funding from CEMPRE.

Special focus was given to cooperatives regarding the establishment of policies to support organizational management systems. Policies were discussed, written, approved, and posted on the premises. Training continued during 2023 on management system procedures, organizational compliance, and files management.

Working together, CEMPRE and iWrc took the following steps:

- ▶ Analysis of 2022 efforts: defined an action plan for each organization that would facilitate implementation of the methodology.
- ▶ Shared recommendations to each organization with the goal of improving working conditions.
- ▶ Implemented actions focused on the following categories: Occupational Health, Occupational Safety, Occupational Hygiene, Emergency Control, Forced Labor, Child Labor.

Throughout the implementation of the cooperatives' action plans, cooperatives were assisted with carrying out strict data collection and analysis. Tables 5 and 6 show a dashboard with the tracked performance of each cooperative across the evaluation categories. Continued effort was required for each cooperative to meet the 3-score goal. Of the 26 cooperatives, the average baseline result of the Social Assurance Framework assessment for all categories was a 2.46 rating, showing an increase from 1.83 in 2022. The scoring process is conducted through a series of audits.

Organization	Child labor	Emergency control	Forced labor	Health at work	Occupational hygiene	SST management	Work security	Total
ADEVOLVER	2,00	2,00	2,00	1,67	3,00	2,58	2,50	2,38
ARCOS	2,00	1,00	2,00	1,00	3,00	1,58	2,00	1,67
ASOBALIVA	2,00	2,00	2,00	1,00	3,00	1,58	2,00	1,75
ASOBAPRE	2,00	2,50	2,00	1,00	3,00	1,58	2,00	1,79
ASOGESAMPA	2,00	2,00	2,00	1,67	3,00	2,42	2,50	2,29
ASOREMAGCOL	2,00	2,00	2,00	1,00	3,00	1,67	1,50	1,75
ASORESCATAR	2,00	3,00	2,00	3,00	3,00	3,00	3,00	2,88
ASOREVIVIR	2,00	2,00	2,00	1,00	3,00	1,83	2,00	1,88
ASOUNIVERSAL	2,00	2,00	2,00	1,00	3,00	2,58	2,00	2,25
BASURA CERO	2,00	1,00	2,00	1,00	2,50	1,58	1,50	1,58
Cartagena Amigable	2,00	2,00	2,00	1,67	3,00	2,58	2,50	2,38
COOARPOZ	2,00	1,50	2,00	1,33	3,00	1,83	2,00	1,88
COOEMPRESMAC	2,00	2,00	2,00	1,00	3,00	1,58	2,00	1,75
COORENACER	2,00	2,00	2,00	1,00	3,00	2,50	2,50	2,25
CORAMBIENTAL	2,00	2,00	2,00	2,00	3,00	1,75	1,50	1,92
CORECICLAREC	2,00	2,50	2,00	2,00	3,00	2,83	3,00	2,63
ECOBARU	1,00	1,00	2,00	1,00	2,50	1,50	1,50	1,50
FENACICLAR BARRANQUILLA	2,00	2,00	2,00	1,00	3,00	2,17	3,00	2,13
FENACICLAR CARTAGENA	2,00	2,00	2,00	1,00	3,00	2,08	2,00	2,00
FUNDACION ALIANZAS AMBIENTALES DEL CARIBE	2,00	2,00	2,00	1,00	2,00	1,33	1,50	1,50
FUNDACION HACIA UN MUNDO SOSTENIBLE	2,00	2,00	2,00	1,00	2,50	1,33	1,50	1,54
METROREICLAR	2,00	2,00	2,00	1,00	3,00	1,67	1,50	1,75
NATURA / BARRANQUILLA	2,00	2,00	2,00	3,00	3,00	2,92	3,00	2,75
NATURA / CARTAGENA	2,00	2,00	2,00	3,00	3,00	2,92	3,00	2,75
RECICLA POR CARTAGENA ESP SAS	2,00	2,00	2,00	1,00	1,00	1,08	1,00	1,25
<b>Total</b>	<b>1,96</b>	<b>1,94</b>	<b>2,00</b>	<b>1,41</b>	<b>2,82</b>	<b>2,02</b>	<b>2,10</b>	<b>2,01</b>

Table 5: Social Assurance Framework Scoring 2022

Organization	Child labor	Emergency control	Forced labor	Health at work	Occupational hygiene	SST management	Work security	Total
ADEVOLVER	3,00	2,50	3,00	3,00	3,00	2,83	2,50	2,83
ARCOS	3,00	2,00	3,00	2,67	3,00	2,17	3,00	2,46
ASOBALIVA	3,00	2,50	3,00	1,00	3,00	2,00	2,00	2,13
ASOBAPRE	3,00	2,50	3,00	2,33	3,00	2,42	3,00	2,58
ASOGESAMPA	3,00	2,50	3,00	2,67	3,00	2,75	3,00	2,79
ASOREKO	3,00	2,00	3,00	3,00	3,00	2,25	3,00	2,54
ASORELIT	3,00	2,00	3,00	1,00	3,00	2,00	1,50	2,04
ASOREMAGCOL	3,00	2,50	3,00	1,00	3,00	2,25	2,50	2,29
ASORESCATAR	3,00	3,00	3,00	3,00	3,00	3,00	3,00	3,00
ASOREVIVIR	3,00	2,50	3,00	3,00	3,00	2,42	2,50	2,63
ASOUNIVERSAL	3,00	2,50	3,00	1,00	3,00	2,58	3,00	2,50
BASURA CERO	3,00	2,50	3,00	1,00	3,00	1,83	2,00	2,04
Cartagena Amigable	3,00	3,00	3,00	1,67	3,00	2,83	3,00	2,75
COOARPOZ	3,00	3,00	3,00	1,33	3,00	2,25	2,50	2,38
COOEMPRESMAC	3,00	2,50	3,00	1,00	3,00	2,08	2,00	2,17
COORENACER	3,00	2,50	3,00	1,00	3,00	2,67	2,50	2,50
CORAMBIENTAL	3,00	2,50	3,00	2,00	3,00	2,33	3,00	2,50
CORECICLAREC	3,00	3,00	3,00	3,00	3,00	2,83	3,00	2,92
CORPOGEST	3,00	1,50	3,00	1,00	2,00	1,25	1,50	1,54
ECOBARU	3,00	2,00	3,00	1,00	3,00	1,83	2,00	2,00
FENACICLAR BARRANQUILLA	3,00	2,50	3,00	1,00	3,00	2,83	3,00	2,63
FENACICLAR CARTAGENA	3,00	2,50	3,00	1,00	3,00	2,83	3,00	2,63
FUNDACION HACIA UN MUNDO SOSTENIBLE	3,00	2,50	3,00	1,00	3,00	1,67	1,50	1,92
METROREICLAR	3,00	3,00	3,00	1,33	3,00	2,42	3,00	2,50
NATURA / BARRANQUILLA	3,00	2,50	3,00	3,00	3,00	2,92	3,00	2,92
NATURA / CARTAGENA	3,00	2,50	3,00	3,00	3,00	2,92	3,00	2,92
<b>Total</b>	<b>3,00</b>	<b>2,48</b>	<b>3,00</b>	<b>1,81</b>	<b>2,96</b>	<b>2,39</b>	<b>2,58</b>	<b>2,46</b>

Table 6: Social Assurance Framework Scoring 2023

## Goal Two Results

### **Increase of ISWCs observed wearing PPE by end of 2023 on a consistent basis (at collection points).**

- ▶ 24% improvement in year over year usage of PPE reported in 2023.
- ▶ 78% of cooperatives were budgeting for PPE equipment; the remaining commit to investing as needed.

### **Higher understanding of labor rights/standards and importance of organizing.**

- ▶ When joining the program, none of the cooperatives had Occupational Health and Safety policies posted but by the end of year 3, 100% of cooperatives in the program created, approved, and posted Occupational Health and Safety policies.
- ▶ 50% of cooperatives performed occupational medical examinations for all cooperative members.

### **Improvement in cooperative Social Assurance Framework assessments.**

- ▶ The average score of the 26 cooperatives in the Social Framework was ~2.5 in December 2023, moving from an average of 2 in January 2023. The overall goal is a score of at least 3, which one cooperative (Asorescatar) successfully achieved.
- ▶ 100% of cooperative workers have labor risk insurance which includes the establishment of the following:
  - *Implementation of clear procedures for reporting work accidents.*
  - *Active equipment maintenance programs.*
  - *A prevention of child and forced labor program.*
- ▶ 80% of cooperatives completed a Risk Management Plan including an Emergency Preparedness Program. The remaining 20% have them under preparation.
- ▶ 26 cooperatives have 100% of their employees trained on occupational risks.
- ▶ There were zero reports of accidents in 2023 and zero hours of work lost to injury.

## Analysis of Goal Two Results

The categories of Child Labor, Forced Labor, and Occupational Hygiene were those that showed the greatest progress. There was also a considerable progress in the Occupational Safety and Emergency Control categories.

The Health at Work category continues to maintain a low average, with respect to the other categories, due to the costs associated with carrying out occupational medical examinations. However, the program has been successful in raising awareness about maintaining healthy habits and lifestyles, and members are encouraged to use medical services at any sign of deterioration in their health. While the goal was a 30% improvement in PPE usage; only a 24% improvement rate was measured, so more emphasis is needed in this area in 2024 to ensure workers understand the need for personal protective equipment. Most cooperatives reported budgeting for PPE but incorporating PPE use into recyclers' daily practices remains an area for improvement.

OSH management (listed in the chart as SST using the Spanish acronym) is the other category where organizations have shown progress. Further progress can be made on completing formalization responsibilities within the recyclers' organizations, especially around annual medical examinations. In most cases, there are members of the cooperatives that are willing to support OSH management, but they are not seen as formal OSH professionals to their colleagues or before the authorities. Organizations have worked to advance safer working conditions and implement policies of no child or forced labor. It was a notable achievement that 100% of the organizations' employees have been insured for occupational risks and 100% of the organizations have an Occupational Health and Safety policy. It is important to continue with the work in 2024, implementing actions in favor of the workers of the organizations and to comply with the legal requirements related to occupational safety and health.

Organizations need to consider how best to cover the cost for each member's occupational and safety examinations, as well as improving management systems. Although challenges remain, it is significant that there are organizations that are close to reaching the 3.0 score in all categories.

# Goal 3

## Volume of Low-Value Plastics Collection Increases

### Type and amount of plastics collected in 2023:

- ▶ A total of 20,090 metric tons of plastic was collected by recyclers and through optimizing the collection routes of the organizations involved in the project.
  - This is an increase of 25% compared to what was collected in 2022.
- ▶ The amount of *low-value plastics* collected through the enhanced income plan increased significantly from 2022, increasing from 149 metric tons (164 US tons) to 434 metric tons (478 US tons).
  - This is an increase of nearly 200%.

### Tons by Type of Plastic

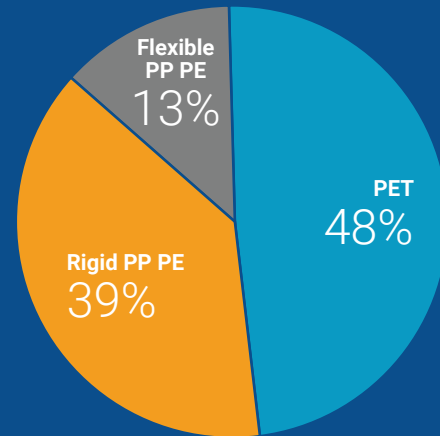


Chart 1: LVP Collected 2023

### Analysis of Goal Three Results

The increase in collection of both tracked categories of total plastics and the low-value plastics may be tied to numerous factors in which the project partners have played a part, such as community engagement, raising awareness about the importance of separating recyclables –which improves the quality of recyclable material and reduces collection times– and appreciating the collectors, as well as the enhanced income program for the collectors.

Recycler organizations rely on the prices they receive for the materials they collect to be sustainable. The price of other plastics collected is influenced by various factors that impact the economic balance of the system.

### Factors Influencing Price Fluctuations

#### Positive Influences:

- ▶ Demand-Supply Dynamics: Increased demand for recyclable materials due to environmental awareness and/or government regulations leads to price variation.
- ▶ Market Conditions: Economic growth and industrial activity drive demand for raw materials, affecting recyclable material prices.
- ▶ Quality of Materials: High-quality recyclables are often priced higher due to their increased utility and market demand.

#### Negative Influences:

- ▶ Global Economic Conditions: Economic downturns or trade conflicts can decrease demand for recyclable materials, resulting in price declines.
- ▶ Technological Advances: Innovations in material processing or alternative materials can reduce the demand for certain recyclables, affecting prices.
- ▶ Policy Changes: Changes in recycling policies or regulations can affect the market dynamics.



### **Challenges for Cooperatives/Warehouses Regarding Material Prices:**

- ▶ **Volatility:** Fluctuating material prices pose challenges for warehouses in planning and budgeting, as they may struggle to forecast revenue accurately.
- ▶ **Inventory Management:** Rapid price changes can affect inventory valuation, potentially leading to inventory write-downs or excess inventory issues.
- ▶ **Profit Margins:** Cooperatives/warehouses may face pressure on profit margins during periods of low material prices, needing cost-cutting measures or diversification strategies.
- ▶ **Contractual Obligations:** Long-term contracts based on fixed material prices may become unfavorable during periods of price volatility, affecting profitability.

Since 2016, with the issuance of Decree 596/2016 that regulates recycling within the framework of public sanitation services, the country has been collecting data on the management of different materials through the SUI system (Unique Information System in English). For 2022, according to SUI, 2.4 million tons of materials were collected for recycling by the public sanitation service. According to information from the SSPD (Public Services Oversight in English), in 2022, 37.5% of the total reported materials were plastics (914,900 tons/year). Through CEMPRE projects there was a 50.9% increase in the recovery of plastic waste between 2022 and 2023.



# Goal 4 **Develop/Strengthen the Supply Chain to Incorporate LVP into Durable Goods**

A key objective of the SPPIRe project in Colombia has been to implement the enhanced income program for the informal sector collectors to collect LVPs (without reducing current efforts to collect valuable materials) at scale; and store the collected material properly, while seeking viable end markets for LVPs. CEMPRE has tracked the following types of end-markets for LVPs being collected.

- ▶ For colored PET: one company is using the material to make clothes hangars
- ▶ For PE and PP flexibles: one company is using the material to make bags
- ▶ 13 other companies are receiving plastics for processing into pellets for other household goods

Colored PET can currently be transformed into products such as brooms, hangars, and recycled plastic lumber/wood, among others. However, colored PET and PET used for storing cooking oils continue to face challenges in the recycling process. For flexible PP and PE, the primary end markets are recycled plastic lumber/wood, bags, and secondary packaging, among others. Some end markets are also informal businesses, making it challenging to fully track once the material is purchased.

## **Analysis of Goal Four Results**

While CEMPRE identified some end-markets for the low-value plastics, the project team agreed that end-markets could be further developed and strengthened to make them more sustainable. iWrc led the analysis of SPPIRe as a sustainable business model and concluded it is feasible if a “connected ecosystem” can be structured within existing supply chains. A connected ecosystem refers to a network of relationships and interactions between various stakeholders, processes and systems that work together to achieve the goal of creating value within the supply chain. The connected ecosystem is founded into collaboration and communication among stakeholders including recyclers, coops, aggregators, producers, suppliers and communities, generating value for all within the circular economy principles of reducing waste, reusing resources and recycling materials. This connected ecosystem is dependent on the understanding of how each step of the value chain impacts the steps before and after them.

The plastics value chain relies on access to the original waste streams by the collectors and the amount of material gathered. Separation of waste by the final consumer enhances material quality by separating wet organics from dry recyclables and eliminating cross-contamination. Separation improves the collection and transport of waste to treatment centers or municipal services, or by public or private waste management providers, specialized enterprises or general government, ultimately enhancing the value of the material by improving material quality and reducing collection time. At the next stage, optimized waste collection or a more organized collection system would mean the material is collected at regular intervals and payments are made directly to the collection business.

This can be accomplished through a multi-level approach, although each comes with its own unique challenges, from financing, training, infrastructure investment, coordination, and dedication to improvement.

- ▶ **Informal Sector registration:** Integration of the informal sector requires a system to encourage registration, including recognition as a tax paying part of the community to which environmental and health and safety assurance is extended.
- ▶ **Infrastructure:** Security of infrastructure brings stability to the value chain and allows the actors to provide security for the collectors and sorters.
- ▶ **Business skills:** Facilitates contract negotiations with local authorities, other value chain actors, recycling companies and product producers.
- ▶ **Access to finance:** Access to finance for working capital and for investment is a key requirement for value chain development. This could be direct funding through grants or other subsidies, or access to loans from banks or micro-financing. It could also include contributions from product producers under EPR.

The connected ecosystem creates an environment of teamwork, relationships and cooperative stakeholders focused on achieving a common objective. The interdependent relationships capitalize on each other's strengths and resources and are built into the ecosystem to enable the achievement of mutual social, environmental, and economic goals. The below factors provide both challenges and opportunities to a sustainable model:

- ▶ **Quality of material:** The value chain revenues depend on the accuracy of sorting, and the resulting level of cleanliness and contamination of the material.
- ▶ **Competitiveness:** The value chain needs to compete in local markets and not be constrained by lack of market access or product quality.
- ▶ **Value chain completeness:** Creating a complete value chain where value increases the closer it gets to manufacturing.
- ▶ **Net revenues:** The net revenues of each actor in the value chain need to be positive, with sales revenues covering the capital and operating costs.

By engaging the supply chain and improving the value of the post-consumer recycled supply chain a financially sustainable and scalable model can be built. The enhanced income for the cooperatives would be derived from improved quality, additional revenue streams and improved logistics and aggregation.



# Goal 5

## Policy Impact

***Amplify the critical role of collectors as part of the recycling value chain; their contribution to the environment and to society AND their need for improved socio-economic well-being through policies like EPR.***

Policies and regulations that have the potential to reduce plastic pollution, such as those mandating EPR and addressing single-use plastics, also provide frameworks to support the integration of recyclers into public service initiatives. The formalization of recyclers' organizations offers them opportunities to actively engage in municipal waste management efforts; however, additional engagement pathways are encouraged, particularly at the policy formulation stage. Otherwise, policy uncertainty and coordination challenges can lead to a weakened recycling system and impact the livelihoods of recyclers. Ambiguities surrounding regulations on single-use plastics and taxes raise concerns amongst recyclers. Moreover, a lack of coordination among government bodies, the private sector, and recyclers' organizations hampers efficiency and effectiveness. Government strategies that potentially exclude recyclers' organizations from public service roles pose potential barriers. Thus, it is important to amplify the role of informal collectors, cooperatives, and warehouses involved in recycling with policymakers both at the local, national and internationally levels, and call for their inclusion in any process.

### Indicators and Results

- ▶ SPPIRe conducted 10 meetings/activities with policymakers in Colombia to share results from the project and the need for inclusion of the informal sector in EPR and other policies.
- ▶ At the international level, three meetings were held during the UN Plastics Treaty negotiations with Colombian government representatives calling for prioritization of the inclusion of the informal sector in the Treaty.
- ▶ 133 awareness-raising activities were carried out across Colombia on sorting and separation at the source, with 227,259 people trained at 16 events including: the Barranquilla Carnival; 5 events within the Independence festivities of Cartagena de India; one event at the Kitesurfing World Cup; and one at the Gastronomic Festival of seafood in the municipalities of the Atlantic.
  - *An additional 3,033,060 were engaged through social media for a total of 3,260,319 people reached.*
- ▶ 6 beach clean-ups resulted in 198.4 kg of unusable waste and 1,288.9 kg of recyclable material collected.
- ▶ 20 initiatives for reducing and recycling plastic were developed through an educational contest held between secondary schools.

## Analysis of Results

Engaging with local and national governments helps amplify the critical role of informal sector collectors as part of the recycling value chain, their contributions to the environment and to society, and their need for improved socio-economic well-being through policies like EPR. CEMPRE met with multiple public sector entities through 2023 to share these perspectives in the areas where SPPIRe activities are taking place, including the mayor's offices of Barranquilla, Cartagena, and Santa Marta, and the Atlántico Departmental Government. They also met with the Ministry of Tourism and Ministry of Environment and Sustainable Development at the national level, amongst others. By sharing the work of SPPIRe, the government is aware of the needs of the informal sector, and the work that the environmental community is undertaking, as they make policy decisions.

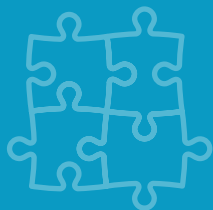
Beach cleanup and citizen educational activities are a priority to improve separation of recyclables and reduce leakage into the environment, including Colombia's coastal and marine systems. In the future, collection points could be established at beaches to reduce the frequency of cleanups needed and for recyclers to collect the materials more easily.

These activities also draw attention from the local governments and help connect the dots between the various sectors of society: the community, the collectors and recycler organizations, and the government on the importance of tackling plastic pollution, and for each sector to play their part within the current system.

While it may be difficult at times to connect these activities directly with results, the continued engagement of the various levels of government, both the mayor's offices and the national government, indicate that the messages are being heard. For example, the Colombian government highlighted the need for the plastics treaty to "recognize and vindicate the voices of...waste pickers, whose contributions, well-being, and potential must be considered..." in its written statement to the UN.



# Lessons Learned



More work can be done to improve the cooperatives coordination with the formal processing industry to ensure the traceability of the marketed material.



Financing tools for large-scale investment present opportunities for expansion and innovation. These investments can be for both the cooperatives and the broader recycling sector and focus on logistics, aggregation, more automated separation, and innovation in recycling.



The recycling industry faces uncertainty, particularly regarding policy implementation and coordination challenges. Ambiguities surrounding regulations on single-use plastics and taxes raise concerns about their impact on the recycling system. Moreover, a lack of coordination among government bodies, the private sector, and recyclers' organizations hampers efficiency and effectiveness.



Limited professional capacity for corporate formalization and inadequate technology for material preparation within recyclers' organizations hinder progress. Reliance on intermediaries for selling and buying, coupled with the dominance of some processors in the market, worsens challenges.

# Conclusions & Next Steps

The goals of the SPPIRe project for 2023 were predominantly met and will be built upon for 2024. The project continues to demonstrate how important employees of recycler organizations/cooperatives and individual waste collectors and broader economic factors are to addressing the immediate challenges of plastic waste collection and pollution prevention. The project is on track to meet the goals listed at the start of this report, which are summarized as: *improvements to the social and economic wellbeing of ISWCs and the environment, as well as the integration of ISWCs into EPR and other regulations.*

In 2024, SPPIRe work will continue with inviting the same 26 cooperatives to participate in continued efforts to professionalize, protect, and ultimately strengthen their organizations and the individuals within them.

Improving the socio-economic well-being of those on the frontlines of the plastic pollution crisis remains the core focus of the project. The progress being made in those areas takes time but is steadily improving. It will be important for the recyclers' organizations to maintain their engagement in the formalization process and professionalization opportunities.

The extensive engagement with various stakeholders, including government bodies, civil society, and industries, reflects a collaborative effort to amplify the critical role of recyclers to prevent materials from accumulating in landfills or open dumps, and ultimately preventing it from polluting the ocean and broader environment.

While there is an immediate need to ensure recycling systems are viable and efficient, there is also a larger movement at work to consider reuse and refill systems and how recyclers and collectors can be part of this longer-term solution to reduce many single-use items. By advocating for policy reforms and educating the public on waste reduction and proper waste management practices, the project seeks to support systemic change and ensure a just transition.

The SPPIRe project has evolved over the past three years and will continue to advance with a more fine-tuned focus on several areas. Designing a feasible commercial marketplace for LVPs will increase demand and drive collection. This will ensure that informal waste collectors and recyclers receive higher incomes and more financial benefits through the sale of materials. Building capacity through iWrc University and the additional training required towards formalization will not only improve working and living conditions, but also improve the financial well-being of the collectors and recycler organizations through government subsidies. Finally, the continued effort on amplifying the critical role of collectors as part of the recycling value chain through policy will drive an evolution of the recycling supply chain.

As the global community continues to work towards an international agreement on plastics through the United Nations Environment Program, there will be further opportunities to share what has been learned from this project with policymakers at the highest level to call for inclusion of the informal recycling sector in the treaty.

