



Success Story Circular Economy Pilot in Colombia

Prologue

The PROMAR project - Preventing Marine Litter in the Caribbean Sea aims to reduce the flow of plastic waste (mainly plastic packaging and single-use plastics) reaching the Caribbean Sea, promoting circular economy solutions in the Dominican Republic, Costa Rica and Colombia. The British Virgin Islands, Saint Kitts and Nevis, Trinidad and Tobago, Guyana and Suriname have joined as additional countries in the project.

PROMAR is funded by the German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV) and managed by the German organisation adelphi.

As part of the project, PROMAR BlueBox was created, a collection of various tools, guidelines, tutorials and materials that will help you implement circular economy solutions to reduce marine litter in your municipality.



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SUMMARY

Circular Economy Pilot



Santa Marta, Colombia Los Cocos Beach Mouth of the Manzanares River



July 2022 to September 2024

Partners: NGOs, universities, private companies, local government and central government

Goals

1.

Strengthening the technical capacities of actors linked to the extended producer responsibility (EPR) scheme

2.

Promoting circular economy solutions in waste management

3.

Facilitate access to technical and financial resources to implement waste reduction strategies

PROBLEM ADDRESSED



When the pilot program was launched, the Manzanares River and Los Cocos Beach area in Santa Marta was facing serious plastic pollution due to the inadequate disposal of waste by residents on the riverbanks. This river, vital to the city, carried waste to the sea, affecting marine life, coastal ecosystems and human health. The pollution also compromised the tourist appeal of Los Cocos Beach, essential to the local economy.

The pilot program focused on reducing waste entering marine environments through circular economy strategies and Extended Producer Responsibility (EPR).

Consequences of marine pollution



- Plastic ingestion causes health **problems or death of animals**
- Animal entanglements in plastic waste
- Accumulation of **microplastics** in the oceans affects plankton and other forms of **marine life**
- Additives contained in plastic dissolve and damage the ecosystem



- Disruption of ecosystems affecting **fishing and tourism**
- **Aesthetic degradation** of beaches and coastal areas due to plastic waste – decrease in tourists
- **Costs** associated with cleanup efforts



- Direct **health** risks to coastal communities from contact with contaminated water and beaches
- Consumption of **contaminated fish and shellfish** causes health problems
- **Microplastics in the food chain**

PROBLEM ADDRESSED

To address this problem, the Socya Foundation launched the Circular Economy Pilot, whose objective was to contribute to the improvement of the provision of the public cleaning service in terms of recycling and to improve the quality of life of recyclers and their families linked to the project. The key components of the pilot included six pillars framed in the business strengthening plan applied to recycling service providers:



1
**FINANCIAL MODEL
OF THE RECYCLING
PRODUCTION UNIT**



2
**SELECTIVE ROUTE
PILOT OPERATIONAL
PLAN**



3
**METHODOLOGICAL
GUIDE FOR SOCIAL
INTERVENTION**



4
**SOCIAL AND
FINANCIAL SECURITY
PLAN FOR THE
SELECTIVE ROUTE
PILOT**

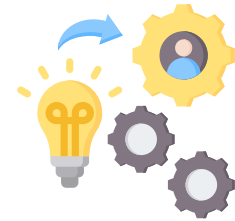


5
**COMMUNICATIONS
PLAN**



6
MARKETING PLAN

IMPLEMENTATION



1 FINANCIAL MODEL OF THE RECYCLING PRODUCTION UNIT

Actions taken:

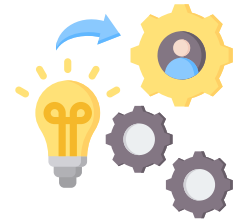
A comprehensive analysis of the service provision area was carried out, identifying subscribers, daily collection targets, number of recyclers required, necessary equipment and support. The financial status of the production unit was diagnosed and collection activities were projected considering variables such as the area of influence, impacted users and type of transport.



Finally, a short, medium and long-term financial modulation was developed, with the aim of guaranteeing the **financial and social sustainability of the project.**

Based on the analysis, it was concluded that, in order to provide service to the **8,000 homes**, at least **0.8 tons of recyclable material** must be collected per day; in addition, 6 professional recyclers and 3 vehicles with a load capacity of 300 kg and 1.5 m³ in volume were required; at least 1 transfer per vehicle must be made during the micro route.

IMPLEMENTATION



2

SELECTIVE ROUTE PILOT OPERATIONAL PLAN

This plan must be formulated in accordance with the company's objectives, defining the specific strategies and actions to achieve them, with a focus on aspects related to the operation, logistics, collection and transportation of materials in the specific area of service provision.

In the circular economy pilot, the actions carried out within the operational plan were:

Selective route design*

- Consulting in public service provision
- Selective route design
- Financial models
- Material valorisation through circular economy strategies
- Environmental culture - door-to-door training



- Georeferencing of micro collection and transport routes.
- Geographic position of vehicles (GPS).
- Monitoring of times and movements of collection vehicles.
- Platform for information management.

Information system

- Information system in accordance with the needs of the standard.
- Traceability of collected material.

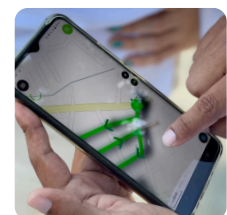


Support in machinery and equipment

- Vehicles equipped for recycling transport with satellite tracking (GPS).

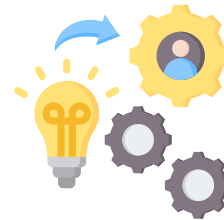
Support in equipment and personal protective equipment (PPE)

- Provision of boots, trousers, shirts and a kettle for the associations' recyclers, together with PPE such as gloves, goggles and safety equipment for the wineries.



*collection systems designed to separately collect different types of waste according to their nature and characteristics.

IMPLEMENTATION



3

METHODOLOGICAL GUIDE FOR SOCIAL INTERVENTION

Actions taken:

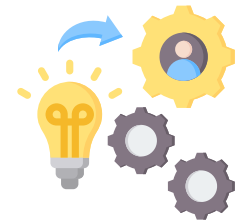
The Socya team developed a guide to improve the working conditions of professional recyclers and their quality of life.



Through the implementation of this Guide, the following was achieved:

- Facilitate the discovery of solutions to the various problems faced by recyclers so that they can improve their living conditions and reach their full potential.
- Conduct family characterization of members of recycling organizations linked to the “PROMAR” Project.
- Establish the average minimum living standard (basic and essential material conditions to ensure a dignified and autonomous survival) according to the needs of the partners and the capacities of the organizations linked to the project.
- Establish strategies to strengthen the social skills and abilities necessary to improve the adherence, relationships and sense of belonging of the associates to the organizations linked to the PROMAR project.

IMPLEMENTATION



4

SOCIAL AND FINANCIAL SECURITY PLAN FOR THE SELECTIVE ROUTE PILOT

Minimum living wage assurance program for the recycling population

This program, based on a weekly collection goal, provided subsidies to guarantee recyclers a legal minimum wage and compensation to the organization to cover essential operating costs.

Assurance program for the supervision of the selective route

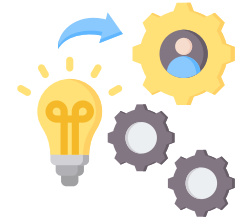
To ensure the monitoring and control of the operational plan of the circular economy pilot, an economic incentive is proposed for the supervisor, who accompanied the recyclers and was responsible for providing the appropriate tools and equipment, ensuring compliance with the assigned functions.

Resource assurance program for the provider of the activity

This program was developed to mitigate the impact on the income of recyclers and organizations during the transition to formalization, seeking to guarantee the economic sustainability of the business. It operated under the figure of temporary economic compensation, conditioned to certain enabling criteria.

The **incentives** for these programs in the circular economy pilot were maintained until the pilot reached financial equilibrium or until the allocated resources were exhausted.

IMPLEMENTATION



5

COMMUNICATIONS PLAN

This plan outlines a strategy to effectively reach the target audiences by defining specific objectives to achieve and the corresponding tasks and actions required to accomplish them.

Actions implemented within the pilot:

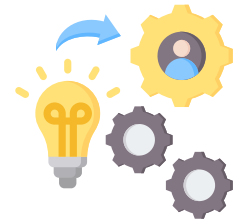
- Door-to-door training sessions were held for service subscribers, stickers were installed in trained homes, and magnets were distributed as a reminder of collection frequencies.



- Recycler visibility was achieved.
- The PRAE (School Environmental Project) was developed in 4 educational institutions in the district of Santa Marta.
- Awareness was raised in the community through loudspeakers, radios and recreational activities, as well as the implementation of designs on bicycles for greater visibility and collection dates.



IMPLEMENTATION



6

MARKETING PLAN

This plan allows the integration of the different actors in the production chain, strengthening and enhancing the utilization rates and generating positive impacts on the use of natural resources.

Actions implemented:

Within the Circular Economy Pilot, it was possible to identify managers, providers and transformers in the territory, which allowed for direct agreements to be made and for the reduction of intermediaries in the value chain.



The actors responsible for the processes of capture, logistics and collection of recyclable materials, such as Nuevo Esfuerzo, Asoreapam, Coempremarc and Petagua, were successfully linked to the organizations dedicated to the transformation of these materials, including Cristalería Peldar, Colombia Recycling Company, Essentia, Prila, among others.

These organizations were also able to join the Repack collective plan within the framework of Extended Producer Responsibility – REP.

RESULTS



Colombia's Circular Economy pilot achieved important results, including:

1

Transformation of **5,652** tons of recycled materials, **9,637.45** tons of CO₂ equivalent.

2

Strengthening of **4 recycling organizations** and **3 recyclers** of recoverable materials.

3

Business strengthening plan methodology – 6 pillars for articulating the REP scheme with Comprehensive Solid Waste Management (GIRS).

4

Three **operational plans** formulated and **socialized**.

5

The **transformation of the material collected** by the pilot, integrated into the REP, made it possible to reduce intermediaries in the value chain, thus optimising profitability.

RESULTS



Colombia's Circular Economy Pilot achieved important results, including:

6

The transformation of **3,373 tons of plastics** (PP and HDPE) was consolidated within the framework of the REP, in conjunction with Essentia, managing to avoid 3.08 tons of CO₂ equivalent (MTCO₂e).

7

Recycling campaigns were carried out to raise awareness among recyclers and raise awareness in **24,147 households** through visits, teaching them separation practices and proper waste management.

8

Door-to-door awareness raising for nearly **46,000 people** on responsible consumption and proper waste management to prevent marine pollution.

9

Personalization of the tricycle and the routes - humanizing the provision of recycling services and making the recycler and the organizations visible.

10

6 educational institutions trained through environmental education workshops on responsible consumption and closing the cycle, in conjunction with Corpamag.

11

Correct **identification of key actors**, which enabled effective collaboration, ensuring proper execution of the pilot and facilitating crucial decision-making for its success.

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Testimonials

Rafael Lugo, 31, a public accountant in his native Venezuela.
Recyclers' organization. New effort.



"Since I joined the PROMAR project in Santa Marta, I walk the streets every day with my tricycle and the recycling bell. My goal is to remind people to separate their waste in order to manage it properly and prevent it from reaching the sea. This work has not only improved my quality of life, but it also makes me proud to know that I am helping the environment and the community."

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Testimonials

Rosa Pacheco, entrepreneur. ASOREAPAM Recyclers Association.



"The tricycle helps me reduce my trips, improve my recycling route and make less effort. For me and my colleagues, the psychosocial and emotional support of the PROMAR project is very valuable, as it has allowed us to change habits and thoughts, improving our interpersonal, family and social relationships. I joined the project from the beginning and, over time, I have learned and adopted the methodologies, contributing daily to a cleaner Santa Marta. I have worked with several organizations linked to the project, marketing materials managed in the neighborhoods with my husband, which has improved the recycling service and our quality of life through the sale of the materials."

SUCCESS FACTORS, LESSONS LEARNED, AND CHALLENGES



The Circular Economy Pilot had important success factors, including:



The successful implementation of the **6-pillar methodology** in the pilot's area of influence was key to structuring and guiding the development of the project, ensuring a comprehensive and sustainable approach in all its phases.



The **articulation of the REP** with the provision of services was key to achieving the **financial sustainability** of the recycling associations, guaranteeing their long-term viability and strengthening their operational capacity.



The **direct link between processors and managers** (recycling organizations) eliminated intermediaries, resulting in increased profits for recyclers and improved process efficiency.



The **alliance with the Ministry of Environment and Sustainable Development** increased the visibility of the project, broadening its reach and strengthening its impact on the community and the environment.



Consumer education, through the door-to-door strategy and REP at school, was key to promoting proper waste separation and recycling. This not only contributed to environmental protection, but also supported the work of recyclers, generating a positive impact on the community and waste management.

SUCCESS FACTORS, LESSONS LEARNED, AND CHALLENGES



The Circular Economy Pilot had important lessons learned, including:

Lessons learned

- 1. Coordination between relevant actors:** Correct coordination between key actors in the territory is crucial for the proper development of the project. Many decisions depend on these actors, so their active participation and alignment is essential for success.
- 2. Psychosocial support:** Psychosocial support is essential for recyclers, as many face personal problems that affect their work performance. This support allows them to overcome obstacles and improve the quality of their work, ensuring greater efficiency in the project.
- 3. Respect for the social dynamics of the territory:** It is important to recognize and respect the social dynamics of each community. People have different customs, cultures and ways of interacting, which must be considered when designing and implementing any initiative. Adapting to these particularities is key to the success of the project.
- 4. Start with the financial and social pillar:** When starting with the 6-pillar methodology, it is essential to start with the financial and social pillar. These pillars are the foundation on which the others are built. Having a clear understanding of the financial status of the organization and its staff is necessary to ensure that the project can be developed sustainably.

SUCCESS FACTORS, LESSONS LEARNED, AND CHALLENGES



The Circular Economy Pilot had important challenges, including:

Challenges

- 1. Meeting collection goals:** Maintaining a constant pace of collection and meeting established goals was a challenge, as it depends on several factors such as the motivation of the recyclers, the available infrastructure and the cooperation of the community.
- 2. Integrating Extended Producer Responsibility (EPR) with the provision of recycling services:** This was a major challenge due to the regulatory differences between the two systems. To overcome this, hard work was carried out with recycling associations to differentiate between post-consumer and post-industrial waste, since EPR only admits the former. This effort allowed them to adjust their practices, aligning the interests of recyclers, producers and other stakeholders, improving the sustainability and efficiency of the project.
- 3. Staying on Route:** Ensuring that recyclers maintained a consistent and efficient route on their journeys was a logistical challenge. This included overcoming obstacles such as lack of infrastructure, variability in the amount of materials collected, and weather, which could affect the regularity of routes.
- 4. Psychosocial support:** Many recyclers face personal problems that affect their performance at work. Providing adequate psychosocial support was a challenge, but essential to maintaining their motivation, improving their well-being and ensuring that they fulfilled their responsibilities effectively.

FUTURE PLANS

Given the success of the Circular Economy Pilot, plans are being made to:



Provide sustainability to the pilot through the alliance with the REP (repack).



Maintain relationships with large transformers to continue closing the cycle of materials at the best price.



Seek new financing alliances to continue PROMAR activities.

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