

# CASE STUDY QUALITY OF LIFE PROFESSIONAL RECYCLERS IN COLOMBIA



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| <b>Study location</b>   | <i>Barranquilla, Colombia<br/>Bogotá, Colombia</i>                   |
| <b>Organisation or researcher that developed the case study</b> | <i>Business Commitment to the Circular Economy – CEMPRE Colombia</i> |
| <b>Dates</b>  | <i>09/06/2025 to 08/07/2026</i>                                      |

## Introduction and approach

In Colombia, there are few studies related to the quality of life of informal recyclers and the factors that influence their ability to earn a decent wage. Furthermore, historically, this population has been excluded and stigmatised despite playing an essential role in the country's environmental management and circular economy. To learn about the reality of this important guild in the country, a study was conducted in two cities with different geographical characteristics (Bogotá and Barranquilla) but which face common challenges arising from the social, economic and cultural contexts of each territory. The study also took into account one of the factors affecting their income, given that they have managed to have their work recognised as an essential activity within the public sanitation service and are remunerated with part of the fees charged to users for the collection, transport and final disposal of recyclable waste. However, informal employment and low remuneration for the sale of materials mainly affect the housing and health conditions of approximately 22,000 recyclers and their families who depend on this activity.

This report presents the results of a study carried out by CEMPRE Colombia on the quality of life of the recycling population in Colombia in the cities of Barranquilla and Bogotá. The study was conducted through a 39-question survey of 81 recyclers aged 20 to 76 (43 male and 38 female) from 15 recycling organisations established as public service providers in the recycling sector and which are part of two initiatives led by Cempre: Movimiento Re for Barranquilla and Reciclar Tiene Valor for Bogotá. The study considers key dimensions such as income, education, health, housing, social participation and perception of well-being, integrating both quantitative indicators and the voices and experiences of the recyclers themselves.

## Contextualisation of the Colombian scenario for recyclers

Colombia's experience in integrated solid waste management with social inclusion of the waste picker population is a global benchmark. For almost half a century, recycling workers have fought for the dignity of their work, seeking social recognition, fair wages and effective inclusion in the public sanitation service. In the last two decades, the regulatory framework for the sector has incorporated the activity of solid waste recovery.

In 2016, the State enacted Decree 596, amended by Decree 1381 of 2024, which established the regulatory framework for defining the operational scheme for recycling within the public sanitation service and a transitional regime for formalising recycling work throughout the country, allowing the recycling population to access payment of the public sanitation service fee, thus recognising the work they have historically carried out.

The fee for the provision of the recycling activity corresponds to the payment made by all users and is calculated according to the tonnes reported by each of the providers of the activity. In accordance with the spirit of the regulation, this remuneration must reach each of the recyclers belonging to the recycling organisations. This opened the door for each recycler to receive, in addition to the income from the sale of the material, an additional payment for the provision of the service (the latter payment may be made monthly or bimonthly).

This meant that professional recyclers had to organise themselves into associations, cooperatives or foundations, as this is a requirement for establishing themselves as providers of recycling services and therefore for accessing payment of the fee. This is why most professional recyclers in the country are organised. However, because this formalisation process is gradual, being organised does not guarantee access to social security or other labour guarantees. In this study, those who belong to an organisation but do not have access to social security are referred to as 'informally organised recyclers'.

In accordance with the above and for the purposes of this study, in Colombia we mainly find informally organised professional recyclers, i.e. those who are linked to a recyclers' organisation but do not have access to social benefits (EPS, ARL and pension). On the other hand, no formal recyclers were found, as the reality for recyclers is that no organisation covers social security costs due to the high costs involved. The independent recyclers in the country are mainly street dwellers who do not have recycling as their regular occupation.

## A – Current income of recyclers

The population of recyclers in Colombia plays an important role in reducing the amount of waste that ends up in landfills and in increasing the amount of waste that enters the country's

circular economy chains. Most of them have been forced into this trade due to a lack of opportunities, limited access to other types of work and the need to generate income independently. As it is a job that does not require a contract or fixed hours, their income depends on the amount of material they take to the recycling centres (ECA) belonging to the recycling organisations.

According to the survey, 91% of the recyclers surveyed classify themselves as informally organised recyclers because, despite being part of a recyclers' organisation, they do not have any social security affiliation through it. The remaining 9% identify themselves as formally organised recyclers, as they are affiliated with the organisation and receive some form of social security payment, whether for occupational risk coverage, health insurance, a pension, or all three. None identified themselves as independent recyclers; all recyclers surveyed are linked to a recycling organisation, and these types of actors may be homeless people who deliver the usable material to anyone involved in the recycling trade.

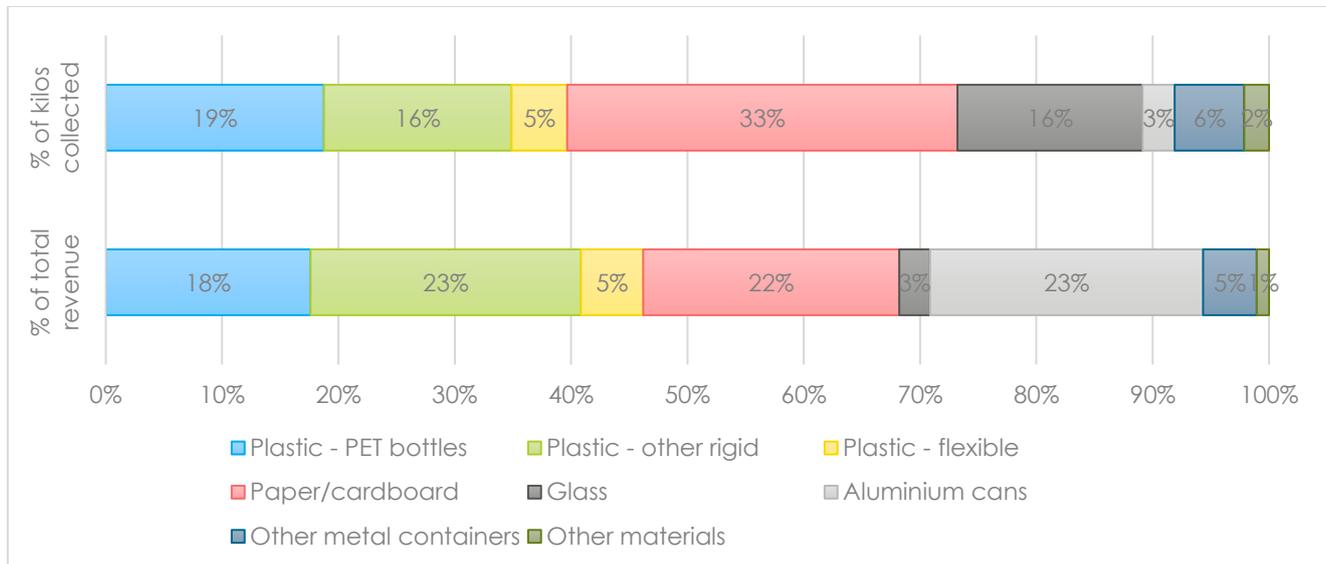
Due to poor waste separation by users, recyclers are forced to remove reusable material from bags they find on the street, anticipating the passage of the vehicle that collects non-reusable waste and thus removing any material that can be reused. This means that 53% of those surveyed collect material on the street and 47% say they collect material in residential areas or shops that are their regular collection points.

The time they devote to their work is part-time and variable. Seventeen percent of respondents say they work collecting material for 3 to 5 hours, 53% for 6 to 9 hours, and 30% for more than 10 hours. In terms of days of the week, 23% indicated that they work 2 to 3 days, 42% indicated that they work 4 to 6 days, and 26% indicated that they work every day of the week. In their free time, they mention having alternative sources of income: 16% generate income through informal sales (selling products from magazines, selling second-hand items they find in recycling, selling food on the street, among others), 10% mention occasionally engaging in cooking or domestic cleaning activities, and 74% mention having no other source of income and depending entirely on recycling.

In this regard, according to the respondents, they earn an average of \$ 834,286.89 from the sale of materials and \$139,129 for public sanitation services, for a total average monthly income of \$973,416.23, with a standard deviation of \$796,959 compared to the total income of each recycler surveyed. It should be noted that 30% of the recyclers surveyed (all present in the city of Barranquilla) mentioned that they did not receive any fees. This may be due to a lack of awareness of their rights, which leads organisations to evade paying recyclers. The income received is correlated with the availability of vehicles that allow them to collect and transport the material. Forty per cent have human-powered vehicles such as carts, 25% mention that they do not have any type of vehicle, 21% have motorised bicycles or motorcycles (motor-powered vehicles), 10% have tricycles (assisted traction vehicles), and 5% mention having other types of vehicles such as market carts that facilitate the transport of the material.

Table 1 shows income by type of material according to the responses given in the survey. An analysis of income from sales shows that rigid plastic, aluminium and cardboard are the

materials that generate the highest income for recyclers, due to their direct relationship with price, weight per kilogram (kg) and availability. This can be seen in detail below:

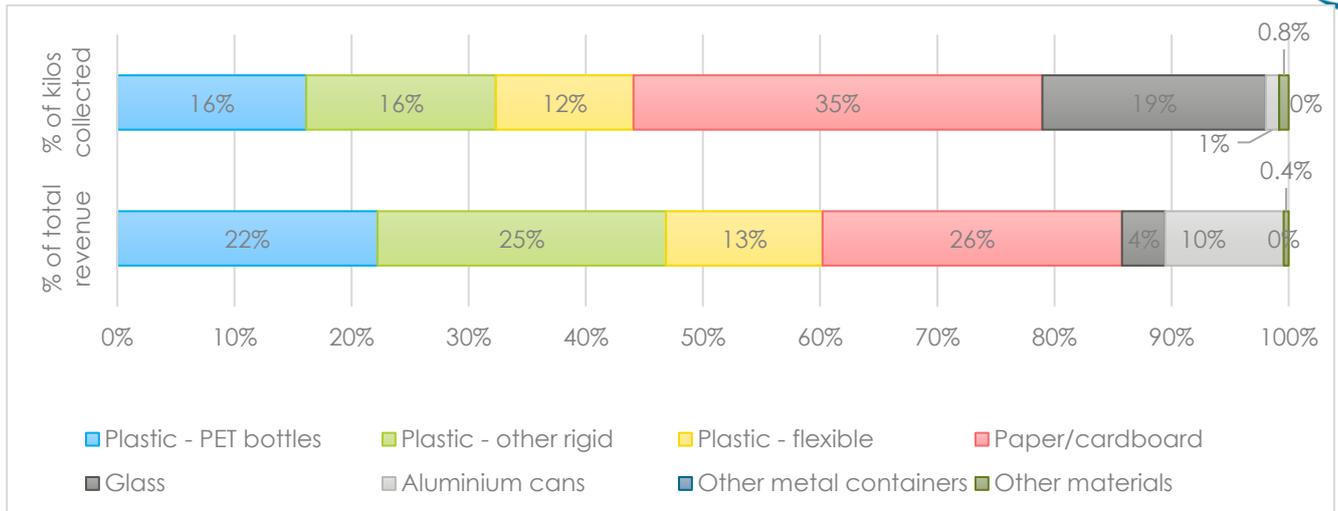


1 : Percentage of income and kilograms collected by type of material. According to the information provided in the surveys by recyclers.

When analysed from the point of view of collection, materials such as aluminium, flexible plastic and other metal containers have the lowest collection rates. In the specific case of aluminium, it ranks third in terms of collection (3%), but second in terms of income (23%). This is because it is one of the materials with the highest price per kg, unlike glass, which is a material with a high collection rate (16%), but it generates the lowest income (3%). In between are materials such as cardboard and PET, which have proportional percentages in terms of collection and income, with 22% and 33% for cardboard and 18% and 19% for PET.

However, through the programmes it runs in these two cities, Cempre has real information on both collection rates and income percentages for each type of material from more than 300 professional recyclers belonging to the 15 recycling organisations that took part in the survey. The information presented in Table 2 is obtained from the reports that each organisation must submit on a monthly basis (information from January to June 2025) for distribution under the Incentive Plan, which is a strengthening strategy generated by the Movimiento Re y Reciclar (Re and Recycle Movement) initiative . Bogotá has value, which seeks to increase the collection of materials and compensate for the value they fail to receive for the price of some of them. With this strategy, a monthly market bonus of \$45,000 is given to approximately 50% of the recyclers who show the greatest increase in material collection for each organisation. Therefore, each organisation must report the total collection by type of material for each recycler on a monthly basis in order to evaluate the increase and thus determine the winners of the bonus.

The information consolidated with the reports from the collection incentive plan by type of material collected by each recycler vs. the income they represent is shown below:



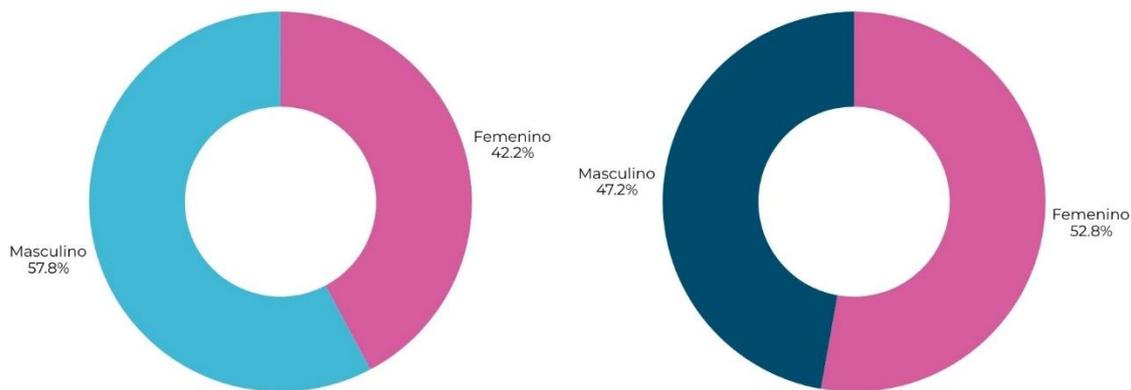
2 : Percentage of income and kilograms collected by type of material. According to information provided by Movimiento Re and Reciclar Tiene Valor, Incentive Plan participation.

According to the average information reported in the Incentive Plan, materials such as cardboard/paper, rigid plastic and PET generate the most income. When analysed, aluminium becomes the fourth material with the highest income, accounting for 10% compared to 1%, the second material with the lowest amount of kilograms collected. This material is mentioned because it shows the greatest change in income compared to the information managed from the surveys and reported by the organisations. The rest of the materials showed similar percentages.

The data shown reflects the average income at the national level. However, bearing in mind that the surveys were conducted in both Barranquilla and Bogotá, the data was separated according to the city of incidence to validate whether income changes depending on the region. Thus, 45 of the recyclers surveyed carried out their work in Barranquilla and 36 in Bogotá. In general terms, the sources of material collection, the type of recycler, and the frequency and methods of payment are very similar in both regions. The data that showed the greatest change was the distribution by gender, as shown below:

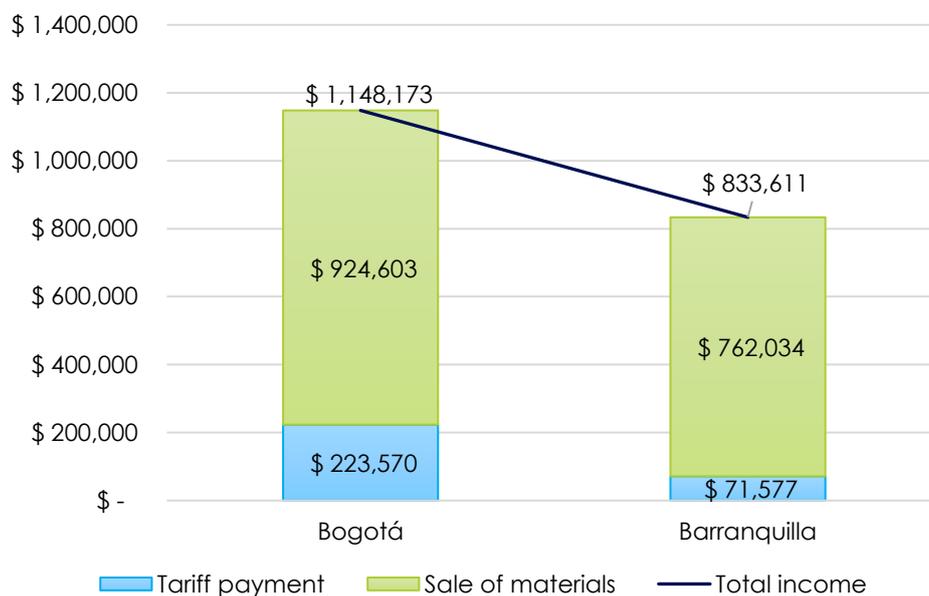
### Barranquilla

### Bogotá



3 chart: Gender distribution in the population surveyed by region.

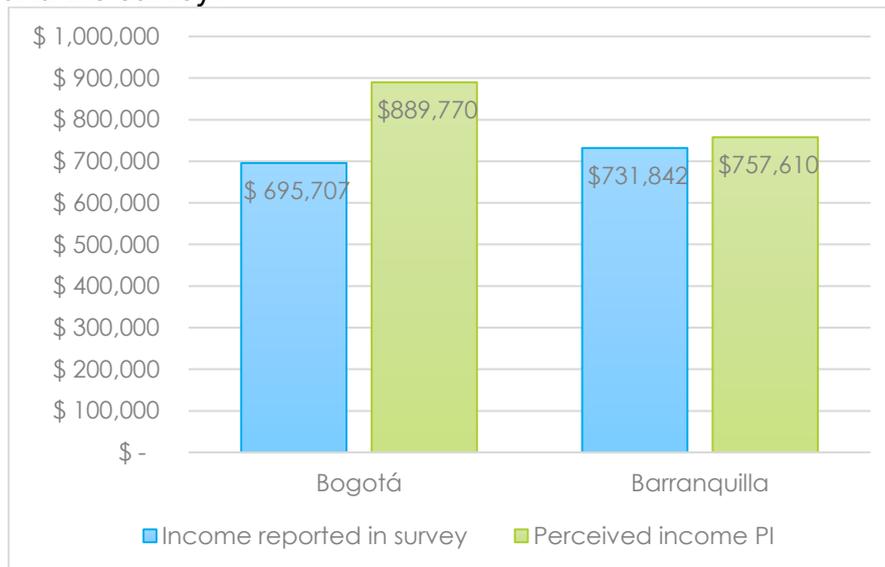
Another piece of data that showed the greatest change was the income received by recyclers. In Barranquilla, of the 45 recyclers surveyed, 24 mentioned that they did not receive any income from recycling fees, with 53% of recyclers surveyed in this city either unaware of this or because the organisation does not transfer this resource to the recycler, while in Bogotá, 100% of those surveyed mentioned receiving income from fees. The non-receipt of this resource, which is complementary to the payment for materials, has a direct impact on total income. according to graph No. 4, recyclers in the city of Barranquilla earn an average monthly income of \$833,611, which is almost 27% less than the average monthly income of a recycler in the city of Bogotá, which is \$1,148,173.



4 : average income per recycler by region.

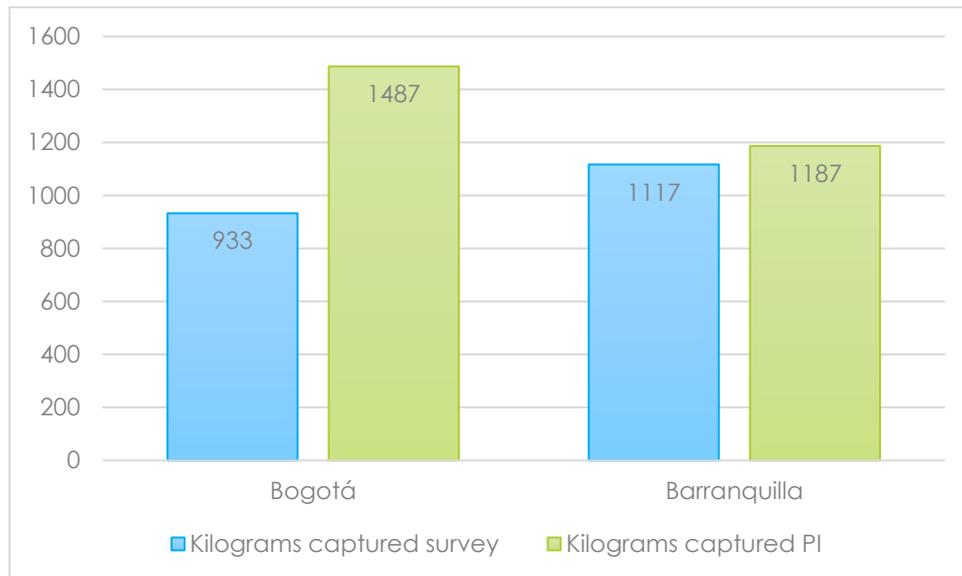
This difference in income may contradict the perception of quality of life that recyclers have in each city. During the surveys, it was found that, in Barranquilla, recyclers view their work positively and believe that it allows them to meet their basic needs, while in the city of Bogotá, recyclers tend to be more dissatisfied, considering that their income does not compensate for the work they do and is not enough to cover their expenses.

When comparing the income reported by respondents in each region with the information obtained from the Incentive Plan reports, it was found that recyclers in Barranquilla perceive their income to be higher than it actually is, while recyclers surveyed in Bogotá consider their income to be lower than it actually is. This difference may be linked to the payment per kilogram of material delivered, as prices per type of material differ between the two cities, being higher in some cases in Bogotá. Figure 5 shows the income values from the sale of collected material for both Bogotá and Barranquilla, compared with the data obtained from the Incentive Plan and the survey.



5 : Income received from the sale of material, surveys vs. incentive plan information and price survey in the cities of Bogotá and Barranquilla.

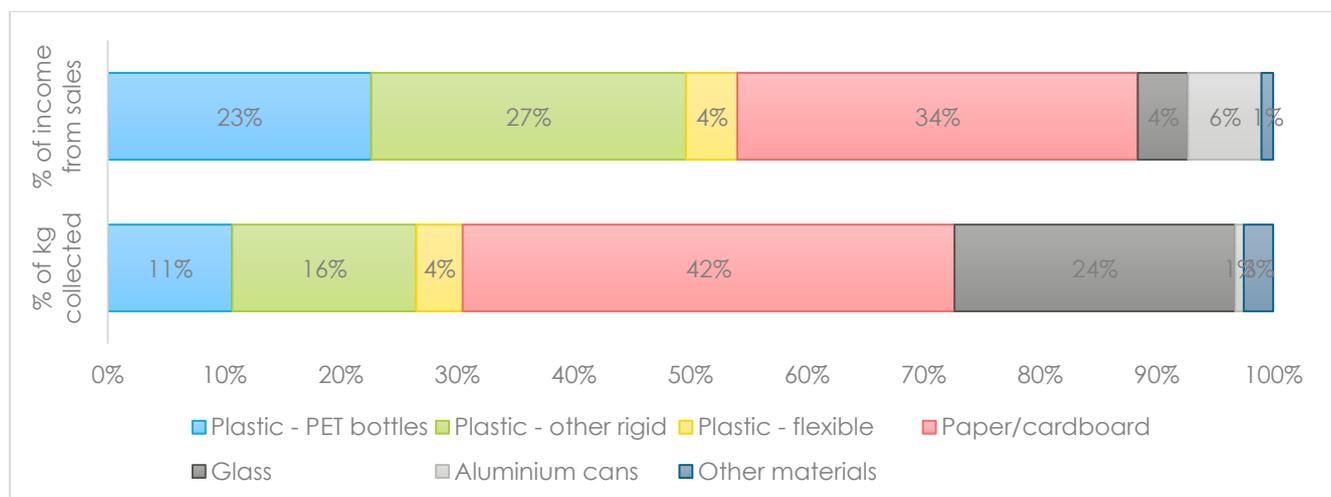
The difference in perception is linked to the total amount of material collected in kilograms by each recycler, being directly proportional. The perception in kg collected by respondents vs. the information from the Incentive Plan shows the same behaviour as the perception of income, where in Barranquilla recyclers perceive that they collect more waste, and the opposite is true in Bogotá, where recyclers perceive that they collect less material than they actually do.



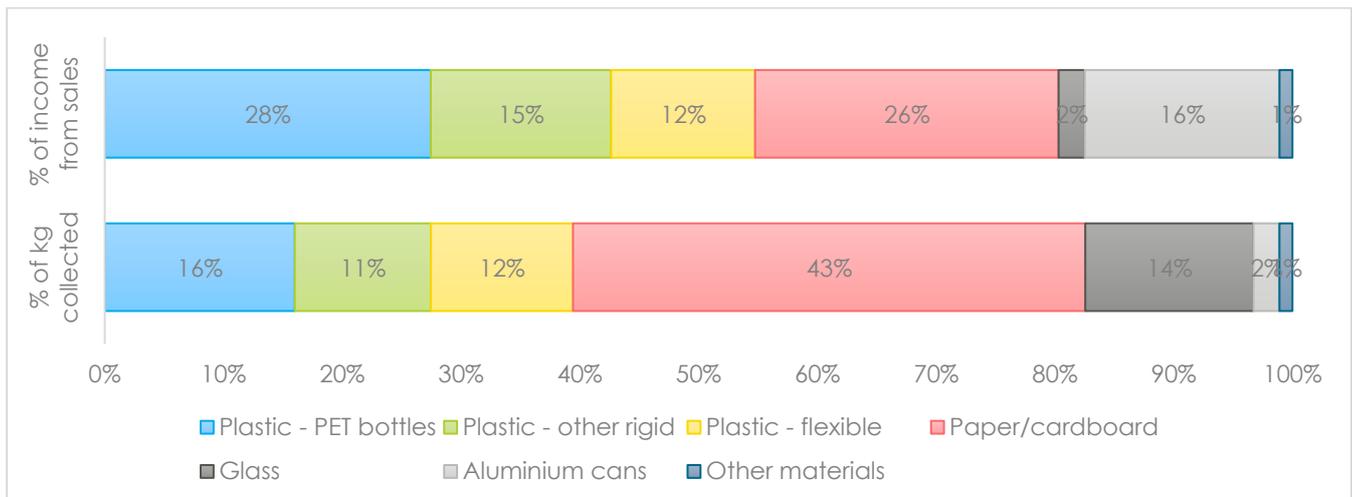
6 : kg of material perceived per material collection surveys vs. incentive plan information in the cities of Bogotá and Barranquilla.

When breaking down income by city and by material type according to the amount of material collected and income received, based on information from the Incentive Plan, it was found that materials such as cardboard, PET and other materials show very similar patterns in terms of collection vs. income. There are differences in materials such as aluminium, glass and rigid plastic. In the case of glass, collection is higher in Bogotá, hence the 10-point percentage increase compared to the percentage in Barranquilla. As for rigid plastic, income is higher in percentage terms in Bogotá, where it is the second material with the highest income, while in Barranquilla it is the fourth material with the highest income.

It is important to mention that in both regions, it was found that the purchase prices of the material paid to recyclers differ. According to the information collected in the price survey in the city of Bogotá, more is usually paid per kg than in the city of Barranquilla. This may be due to the centralisation of some of the processing industries or the availability of the material, as Bogotá is the country's capital and the area with the highest recycling rates.



7 : Percentage of income and kilograms collected by type of material. According to information provided by Reciclar Tiene Valor, Incentive Plan for the city of Bogotá.



Graph8 : Percentage of income and kilograms collected by type of material. According to information provided by Movimiento Re, participation in the Incentive Plan for the city of Barranquilla.

In Colombia, recycling is often perceived as a supplementary source of income rather than an activity exclusive to professional recyclers. This has led part of the population to sell their own waste directly, thereby reducing access opportunities and, consequently, recyclers' income. In addition, it is common for people outside the trade to request payment for the delivery of materials, which increases costs and reduces the recycler's net income. This situation is compounded by inadequate waste separation by the community, which results in usable materials ending up in landfills.

Furthermore, fluctuating material prices and a lack of vehicles with sufficient capacity limit the possibility of increasing their income. This forces them to make more trips to collect material, while some prices are low compared to the effort invested in collection and transport. In certain cases, seasonal variations can reduce the value of some materials by more than 50%.

The survey shows that the recycling population in Colombia plays an essential role in the circular economy and waste reduction, but faces precarious working conditions that limit their quality of life. This is evidenced by the fact that 7% of those surveyed mentioned that they do not have a home, are homeless or live where they work. Most work informally, without adequate access to social security, and depend exclusively on recycling as a source of income, which is unstable and does not reach the minimum threshold established by the national government to cover basic household needs. Unfair competition, poor waste separation by the public, limited opportunities to access suitable vehicles and social discrimination directly affect their productivity and income. In addition, although some materials generate higher income per kilogram, their low availability limits their economic impact, while abundant materials do not adequately compensate for the effort involved due to their low price.

## B - Estimated Decent Income

According to the International Labour Organisation (ILO), a decent household income is one that allows for the basic needs of its members to be met and promotes their overall well-being, guaranteeing effective access to fundamental rights and the possibility of development

throughout the life cycle. In Colombia, there is no single official measure of "decent income," but values can be approximated using national standards such as the minimum wage, the basic basket of goods and services of the DANE (National Administrative Department of Statistics), the MPI (Multidimensional Poverty Index) and international references.

The cost of a healthy diet refers to the monthly cost that a household must bear to ensure that all its members have access to sufficient, nutritious and culturally appropriate food. In Colombia, the National Department of Statistics (DANE) calculates an extreme poverty line based on the minimum caloric cost of COP \$200,000 per person/month in 2024, but this barely covers basic needs. The Food and Agriculture Organisation of the United Nations (FAO) estimates that in 2025, the cost of a healthy diet in Colombia will be approximately 3–4 times the extreme poverty line, i.e. between \$600,000 and \$800,000 per month per person. Therefore, the cost of a healthy diet for a household of four would be around \$1,765,706.

As for the cost of decent housing, the cost of rent or mortgage payments, utilities, and minimum maintenance must be taken into account. According to the DANE Quality of Life Survey and market data, the average rent in cities such as Barranquilla and Bogotá for four people is around \$1,000,000. If utilities are added to this, the average cost of decent housing would be around \$1,250,000.

Separating the cost of housing by region, understanding that the cost of living is usually higher in Bogotá, the value per square metre for a rental property in Bogotá is approximately \$43,000 per square metre. For a 40-square-metre home, this would be a total cost of \$1,720,000. However, in Barranquilla, it is around \$28,000, so for a home of the same size, the total cost would be \$1,120,000. This is the value that shows the greatest variance compared to the different estimated decent income data.

For access to healthcare services in Colombia, there are two types of healthcare coverage: contributory or subsidised. However, there are additional costs such as co-payments, non-POS (Mandatory Health Plan) medications, transport and/or private services, which can be significant. The minimum cost of health services for a person under the contributory scheme was taken from the cost of affiliation for a worker earning the minimum wage in Colombia (\$1,423,500), with an 8.5% contribution from the employer and 4% from the worker, giving a health contribution of \$178,000. For the case study, two adults are taken, who are covered by their family membership and taking into account additional costs such as transport and the co-payment (this fee is paid for each appointment or consultation with a general practitioner or specialist or for tests, etc. This must be paid by both the member and their beneficiaries and is \$4,700 for people with an income of less than two minimum wages. Thus, the estimated cost of health services is \$450,000.

Education expenses depend on age and educational level, and whether public or private education is accessed. Therefore, basic costs such as school supplies, transportation, and uniforms were estimated at \$400,000, taking into account a recent report by the WorldRemit platform.

The cost of decent work includes expenses associated with daily transportation, adequate clothing, PPE (personal protective equipment), and basic tools. The average monthly expenditure of a person who uses public transport in Colombia is approximately \$146,866, a figure that can double for two adults, compared to a household of four people, two adults and two children. Added to this is an estimated cost of \$70,000 for work clothing, bringing the cost of decent work to around \$375,000.

Savings are estimated to be 10% of the decent income per household (\$424,071), so taking into account all the aspects that must be considered as a decent base income for a household of four, the total is \$4,240,706.

### C. Comparable income or minimum wage

The comparable income for workers in similar informal conditions is taken from workers in the agricultural and construction sectors. According to the Colombian Farmers' Society (SAC), by 2023, day labourers (people who work an 8-hour day in agriculture) will earn an average of \$560,295 per month, as they are self-employed workers in the sector. Therefore, by 2025, the minimum income is estimated to be \$962,680.99, taking into account the increase in the data presented from 2023 to 2025 according to the consumer price index (CPI) (2023 – 9.28% and 2024 – 5.2%).

As for construction workers, according to two of Colombia's job search platforms, Computrabajo and Indeed (June 2025), the average monthly salary for a construction worker is between \$1,394,709 and \$1,642,343. These data show that workers in Colombia earn approximately \$1,761,105, taking into account the minimum wage (\$1,423,500), the monthly prorated values of bonuses (2 half-salaries paid at mid-year and year-end), severance pay, health insurance, pensions, and the transportation subsidy, which is \$200,000 for 2025.

According to this, the average income of a professional recycler is more closely related to the average income of a worker in the agricultural sector, especially considering the nature of these jobs, which in Colombia are characterised by being informal, independent and mostly without access to social benefits or the minimum income of an average worker.

### Key lessons and recommendations

The working conditions of the recycling population in Colombia present major challenges. Currently, many recyclers lack the rights and support that labour legislation grants to formal workers: they do not receive a decent wage that compensates them for their work or guarantees a minimum income sufficient to cover the basic needs of their households. This forces them and their families to live in precarious conditions, with inadequate food and housing. The situation is even more critical in a sector where a large part of the population is over 50 years old and relies on this activity as their only source of livelihood, given the lack of job opportunities.

It is important to recognise that, compared to the situation a decade ago, conditions have improved. Today, the work of recyclers is recognised as a legitimate trade that deserves respect and appreciation, thanks to public policies such as Decrees 596 of 2016 and 1381 of 2024. These regulations grant them a fundamental role in waste management, establishing that recycling must be carried out exclusively by professional recyclers and their organisations.

To advance the full guarantee of rights, it is essential to effectively enforce current regulations (Decree 1381 of 2024) and promote progressive formalisation programmes, ensuring that all recyclers are affiliated with social security (health, occupational hazards and pensions), as well as recognition of their rights as providers of a public service. It is also essential to facilitate their access to higher-capacity vehicles in better condition (such as motorised tricycles, motorised carts and others) through soft credit schemes or subsidies, in order to optimise routes and improve collection.

This effort must be accompanied by the strengthening of waste picker organisations, training and providing them with the necessary technology to adequately fulfil their obligations in terms of reporting, fair payment for materials, payment of recycling fees and transparency in income management, ensuring that the benefits effectively reach workers through technological platforms that allow for the traceability of materials collected per kg and transparency in the price paid. It is also necessary to intensify mass environmental education campaigns aimed at improving source separation by households, businesses and residential complexes, thus reducing the burden on recyclers by preventing them from having to rescue materials from mixed bags. Community awareness programmes should also be implemented to combat stigmatisation and discrimination against waste pickers, recognising their work as essential and y for environmental protection and for the achievement of national circular economy goals.

Finally, it is a priority to design policies that mitigate the volatility of prices for recoverable materials, for example through stabilisation funds or public procurement, and to expand economic incentive schemes (such as bonuses or differential tariffs) for those who increase the collection of materials. All of this will help recyclers to earn fair incomes, commensurate with the importance and positive impact of their work for society and the environment.

## Acknowledgements

We would like to thank the CARE project, ISEAL and its sponsors for their support in carrying out this study on the quality of life of the recycling population in the cities of Barranquilla and Bogotá. Their commitment was key to highlighting the conditions, needs and challenges of the recycling sector in Colombia.

We would also like to thank the waste picker organisations and individual waste pickers who participated in the study, whose voices and experience were essential to the development of this report.