



Iniciativa Regional para
el Reciclaje Inclusivo



Comparative study of legislation and public policies of Extended Producer Responsibility - EPR - and the REP for packaging and containers

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Regional Initiative for Inclusive Recycling

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**Comparative study of
legislation and policies
Extended Producer
Responsibility public
- REP for packaging and
containers**

**Comparative study of legislation and public policies
on Extended Producer Responsibility - EPR for
packaging and containers**

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1. Introduction

1.1 Summary

The Regional Initiative for Inclusive Recycling (IRR) seeks to develop and implement activities in Latin American and Caribbean (LAC) markets that: (i) result in an improvement of the socio-economic status of informal recyclers; (ii) facilitate their access to formal recycling markets; and (iii) promote the development of public policy schemes that support the integration of this population into formal waste management systems.

An important factor in achieving these outcomes will be the development and implementation of effective legislation and public policies. Some countries in LAC are beginning to adopt policies and legislation that can be broadly described as extending a producer's responsibility to manage the products and packaging they supply to these markets to include the recovery and management of these materials at the end of their useful life. It is therefore important to assess the implications of these initiatives for the grassroots recycler sector.

The Organisation for Economic Co-operation and Development (OECD) defines REP as "an environmental policy approach in which a producer's responsibility for a product extends to the post-consumer stage of a product's life cycle.

Extended Producer Responsibility (EPR) encompasses a wide variety of approaches that vary significantly in terms of: (i) the range of materials and products obligated; (ii) the degree of responsibility imposed on the producer; (iii) the volume of material managed; (iv) the associated costs; as well as (v) the impact the scheme generates on existing actors in the waste management system: municipalities, private waste management companies, grassroots recyclers, the entire material recycling supply chain.

IRR wishes to make available to policy makers and other key stakeholders in LAC a handbook that summarises and provides an objective comparative analysis of the range of REP models for packaging that have been implemented internationally and are most relevant to LAC.

1.2 Methodology

As a first step, the project sponsors were presented with a range of possible target countries for consideration. As a **second step**, the project team and sponsors mutually agreed on fourteen (14) jurisdictions for the production of summary outlines. With these outlines, the aim was to obtain:

- a summary of the range of REP regulatory frameworks that exist in these jurisdictions; industry
- responses to these policies; and
- provide comments on its relevance for the LAC region, both in terms of REP programme design and inclusive recycling.

Summary diagrams can be found in Appendix 1 of this report.

A key and determining factor in the selection was the desire to focus on jurisdictions in which they already there are producer-supported programmes for which it was expected that information would already be available of the programme.

It should be noted, however, that emerging policies and programmes in China, India and Indonesia may become more relevant to LAC in the near future, given that the EU's REP policies and programmes in China, India and Indonesia may become more relevant to LAC in the near future:

- Each of these countries has established REPs as public policy.
- Most packaging that is currently recycled is collected by grassroots recyclers.
- These countries represent one of the largest trading markets for multinational producers and are also the largest recyclers of used packaging.

China in particular exerts a significant influence on the global recycling markets as the largest consumer of recovered plastics, metals and paper.

Significant developments around REP for packaging and packaging in this country include:

- In January 2009, the China Circular Economy Promotion Law came into effect with the aim of facilitating the circular economy; improving resource utilisation rates; protecting and improving the environment; and achieving sustainable development. This is intended to support the transition from an export-based economy dependent on the import of raw materials to a more domestically focused economy based on increased material recovery and reprocessing.

The National Development and Reform Commission introduced in 2016 a new promotional scheme for extended producer responsibility (EPR) that sets the new national policy direction to "carry out eco-design" and "regulate recycling". To date the main focus has been on electrical and electronic products, automotive products, lead-acid batteries and complex paper-based beverage containers. The REP has been extended to other packaging and packaging types through the development of a mandatory Recycling Catalogue that has identified composite packaging and glass packaging as priorities for achieving higher recycling rates, starting by establishing pilot programmes for these materials.

Increasingly stringent limitations on the import of recyclable materials from other countries to promote higher rates of

- domestic recycling. This has included:
 - Launch of the "Green Fence" in 2013 to significantly reduce abuses by suppliers. international shipments of highly contaminated materials (and even mixed waste) to China.
 - Launch of the "National Sword" in February 2017, with progressive reductions in the allowable contamination rates of imported recyclables from 1.5% to 0.3%.
 - "Import bans on materials" in July 2017, including several categories of textiles and unclassified paper and plastics.

As a **third step** and after a review of the summary schemes, the project team and sponsors agreed on a set of nine (9) benchmark jurisdictions for detailed study. This database of REP programme design and results has been compiled from:

- a review of secondary sources of information;
- the direct knowledge and experience of the consultants; and
- interviews with specialists familiar with REP programmes operating in these countries.

The database can be found in Appendix 2 of this report.

Table 1-1 below shows the countries/jurisdictions that were considered for each of the steps described above.

Table 1-1: Countries/jurisdictions considered for each of the project steps

REP Programme Category	Step 1 - Range of potential candidates	Step 2 - Summary diagrams	Step 3 - Basis of REP data
	Country/Jurisdiction		
REP classic (or 1.0)	<ul style="list-style-type: none"> • Germany • Belgium 	<ul style="list-style-type: none"> • Spain • France 	<ul style="list-style-type: none"> • Belgium • France • Spain
Second generation REP (or 2.0)	<ul style="list-style-type: none"> • Austria • British Columbia (Canada) 	<ul style="list-style-type: none"> • Quebec (Canada) • Turkey 	<ul style="list-style-type: none"> • Austria • Turkey
Emerging and developing markets	<ul style="list-style-type: none"> • China • India 	<ul style="list-style-type: none"> • Indonesia • South Africa 	<ul style="list-style-type: none"> • South Africa
LAC models	<ul style="list-style-type: none"> • Brazil • Chile 	<ul style="list-style-type: none"> • Ecuador • Uruguay 	<ul style="list-style-type: none"> • Brazil • Ecuador • Uruguay

The list of secondary references consulted and individuals interviewed for each of the countries profiled in the database is available in each jurisdiction's section. In addition, field visits were conducted in Brazil and Uruguay. Findings from these visits were incorporated into these sections.

1.3 Definition of REP

The Organisation for Economic Co-operation and Development (OECD) defines REP as "an environmental policy approach in which a producer's responsibility for a product is extended to the post-consumer stage of a product's life cycle". In practice, REP involves producers taking responsibility for collecting end-of-life products and sorting them prior to their final treatment, ideally recycling. REP schemes can enable producers to exercise their responsibility either by providing the required financial resources and/or by taking over the operational and organisational aspects of the process from municipalities, e.g. in the case of packaging and containers. They can do this individually or collectively through so-called producer responsibility organisations (PROs).

Furthermore, EPR can be voluntary or imposed by law and can be implemented through various instruments, such as product take-back requirements or economic and market-based instruments" (OECD; Updated Guidance on Extended Producer Responsibility 2016).

Having started in the late 1980s, SRP policies have now been widely adopted in Europe and North America; implemented in several developed economies in Asia; and are increasingly being proposed in developing countries around the world. Initially, SRP policies focused on mainly in:

- a) Relieve municipalities and taxpayers of the costs of managing end-of-life products and packaging.
- b) Reduce the amount of waste destined for final disposal.
- c) Increase recycling rates of selected products and packaging.

Increasingly, **REPs represent a mechanism for improving resource productivity and the circular economy**, issues that are now high on the environmental and economic development policy agendas of many countries.

REP is also being applied, internationally, to a growing range of products including:

- Packaging
- Waste electronic and electrical equipment (including computers, telephones, lamps, etc.) Household products (including cleaners, paints, solvents, batteries, etc.)
- Pharmaceuticals (including medicines, chemicals, syringes, etc.) Automobiles and
- automobile parts (including tyres, batteries, lubricants, etc.)

Producer" is usually defined, within the context of REPs for packaging, to include:

- The owner of the brand name of a product (i.e. a consumer products company or a retailer of own-brand products).
- For unbranded packaging, the entity that provides disposable packaging to a consumer (i.e. a retailer that provides disposable bags, disposable take-out containers, etc.).
- The entity that markets a packaged product, including through the internet, using a catalogue order system, using a telephone order system, or by means of a similar remote sales method.
For transport packaging (i.e. Amazon for consumer products; or the transport packaging used by brands
- (e.g., the entity that first generates the use of transport packaging within the jurisdiction for the handling or transport of a product sold to a consumer.

A guiding principle of the CSR is to assign responsibility to the entity in the supply chain with the highest power to influence the design and selection of packaging supplied to the market - the producer.

The universe of REP policies and programmes continues to expand and evolve around the world. The first generation was triggered by the policy initiatives of the Organisation for Economic Co-operation and Development (OECD) in the 1980s and these policies were largely shaped by the prevailing conditions in the more developed national markets (Germany, France, Belgium, Japan, Canada, Sweden, the Netherlands, etc.) which, broadly speaking, are characterised by having:

- Extensive waste management infrastructure and policies already in place
- Strong and stable legal structures and institutional arrangements to support the transformation of large-scale and complex waste management systems.
- Relatively affluent, well-educated populations, who demand higher standards of environmental protection and personal health and well-being
- The political will to hold producers responsible for the life cycle impact of the products they produce and sell.
Multinational and national companies are increasingly willing to step up the challenge of designing and implementing
- complex structures as an alternative to interventionist government waste policies (e.g. product bans, green taxes, mandatory deposit/return systems, etc.).

Increasingly, other countries that do not fit the profile described above have begun to adopt and implement REP policies; some based on first generation European models while others are developing new approaches adapted to their unique market conditions. This is also the case in LAC.

1.4 Global mapping of REP experiences and key findings to date

Formal REP and similar producer responsibility initiatives for packaging are in place in at least 50 national and sub-national jurisdictions (states, provinces, departments) around the world.

These approaches can be broadly grouped into five different REP approaches, ranging from regulatory requirements imposed on producers to little direct involvement and responsibility on the part of producers.

producer, as presented in **table 1-2**.

Table 1-2: Examples of regulated and voluntary forms of SRP for packaging and related producer responsibility initiatives around the world.

Full producer responsibility	Shared producer responsibility	Some REP requirements for producers	Packaging tax imposed by the government	Voluntary industry programmes ²
<ul style="list-style-type: none"> • Austria • Belgium • Bosnia-Herzegovina • Bulgaria • Canada (BC, QC) • Czech Republic • Chile¹ • Finland • Germany • Israel • Latvia • Luxembourg • Netherlands • Malta • Mozambique¹ • Poland • Portugal • Sweden • Taiwan 	<ul style="list-style-type: none"> • Australia • Canada (MB, ON, SK) • Cyprus • Estonia • France • Greece • Iceland • India • Indonesia • Ireland • Italy • Japan • Korea • Macedonia • Norway • Romania • Slovakia • Slovenia • Spain • Turkey • United Kingdom • Uruguay 	<ul style="list-style-type: none"> • Brazil • China • Costa Rica 	<ul style="list-style-type: none"> • Ecuador • Hungary • Russia • South Africa¹ 	<ul style="list-style-type: none"> • Argentina • Colombia • Mexico • Panama • Peru • Thailand • USA

¹REP legislation for packaging and containers exists in 34 European nations; 11 countries in Asia, South America and Africa; Australia and five Canadian provinces. Source: Product Stewardship Institute.

Notes:

- 1) This is not an exhaustive list.
- 2) Countries in italics indicate jurisdictions where proposed legislation has been introduced but is not yet in force.
- 3) "Voluntary industry programmes" refers to national, organised, multi-company, funded support programmes.

Key findings

Experience to date with REP programmes has demonstrated the following key findings, summarised under the six headings below.

1

There is no single approach to implementing REPs for packaging. In fact, no two REP programmes are exactly alike.

The REP models currently in force vary significantly with respect to their design features, as presented in **table 1-3** below.

REP design feature	They range from...
The degree of responsibility placed on producers	Shared financial responsibility; up to assigning full financial and operational responsibility to producers for the collection, sorting and recycling of packaging.
The range of packaging used for collection.	Include only easily recyclable consumer packaging, up to and including all consumer, commercial, institutional and industrial packaging. Include packaging only; up to and including both packaging and paper (newspaper, writing paper, etc.)
The goals of the programme.	A single "global" packaging recycling target for all materials; even mandatory minimum recycling targets for each type of material.
How to achieve the goals.	Obligation to achieve targets only through mechanical recycling processes; up to and including energy recovery from waste or chemical recycling as an accepted treatment method.
Design requirements for recyclability.	Establish financial incentives or penalties in the REP programme design and fee-setting methodology to encourage or require producers to change their packaging design; to requiring the use of only recyclable materials; or requirements to use more recycled content.
Roles and responsibilities assigned to other actors in the packaging waste management chain.	That may include one or potentially all: municipalities, government agencies, consumers and, in many developing countries, grassroots waste pickers.

Each of these factors (and many others) will affect the costs of the REP programme and the reduction, reuse and recycling results achieved.

2

The absence of efficient and consolidated systems of Integrated Solid Waste Management.

represents a constraint to the successful implementation of REP schemes

REP programmes in developed economies with comprehensive waste management policies and infrastructure The EU has achieved significant increases in the recovery and recycling rates of packaging and containers.

Markets that do not have comprehensive waste management systems in place, weak enforcement practices and high levels of corruption present **significant barriers and risks** to successful implementation of REP programmes.

- **Limits of responsibility.** Producers fear that they will be allocated overhead costs for developing and operating the entire waste management system and not just the costs of managing their packaging.
- **Domestic competition.** Large multinational consumer products companies may be seen as an attractive target for the REP legislation while their domestic competitors may be exempted from the programme or not be subject to the same enforcement measures, thus creating an uneven playing field among producers.
- **Financing.** The REP financing schemes detailed in this study raise and invest millions of to hundreds of millions of dollars per year, and such funds can attract the attention of governments, regulators or politicians seeking funds for other purposes or where anti-corruption mechanisms are weak.
- **Incentives.** Where large segments of the population are not yet served by waste collection services or where waste generators do not have to pay for waste management services (either through direct user charges or indirectly through taxes), there is less incentive to separate used packaging or other recyclables at source if there is no direct financial incentive to do so.
- **Citizenship.** Citizen participation in the proper management of all their household waste is an essential requirement. to establish the classification of recyclable or organic components.

3

REP programmes are not static

REP programmes for packaging were first implemented in Europe more than twenty years ago. As materials have continued to evolve, so have many of the initial REP programme models, usually in response to changing public policy objectives or to incorporate important lessons learned locally and internationally.

The original "Green Dot" model initiated in Germany in 1996 is not the same REP programme operating in Germany today. And the current German REP model does not necessarily provide a suitable model for all other countries.

4 With few exceptions, the intrinsic value of the recovered used packaging is emissions than the costs of collecting, sorting and recycling these materials separately.

Properly designed, **REP is a mechanism to internalise at producer and consumer level the costs of recovering and managing used packaging** and to provide **an economic incentive for producers to switch. packaging design to reduce material consumption and improve recyclability.**

Aluminium packaging, for example, has well-established markets, a high market value and will generally be less expensive. The cost of collecting, sorting and recycling under a REP programme than the costs of managing multilaminated and recycled packaging.

sachets. As a result, **a REP programme will commonly determine the cost of managing each type of material. and allocate these costs to the producer through a rate-setting methodology determined by the producers.**

These funds are then used to pay for the producer's share of the costs of running the packaging recycling operated by other actors or for financing directly operated management systems by producers, usually through the establishment of a producer responsibility organisation (PRO).

5 Imposing a packaging tax is not the same as implementing REPs.

A fundamental principle of the REP is to enable producers to self-organise; design the most effective and efficient approach to improve packaging recycling rates; supported by an adequate funding mechanism; and maintain direct control over the REP programme funds that are collected. The most effective and efficient REP programme designs maximise the use of local market forces to generate improvements in packaging markets. recycling of containers and packaging.

Government-imposed packaging taxes, or "green" taxes, are generally targeted at general government revenues; they can rarely be earmarked to promote and support increased recycling of waste.

They are generally used to fund other types of government programmes; and they are rarely structured to provide an incentive to promote packaging redesign or to increase recycled content. These limitations may be overcome through careful design, but no such cases have been identified through this study.

The possibility of structuring mixed schemes should not be ruled out, taking elements from both pure REP schemes and fee- or tax-based schemes, seeking to balance public and private participation in the process, taking advantage of the private sector's management capacities, and at the same time the state's role of control, regulation and administrator of public goods.

6 Beverage containers are subject to increased regulation

While the beverage industry currently uses high percentages of reusable and recyclable containers and packaging, it is generally the target of more regulation because of the high percentage of reusable and recyclable containers and packaging:

- The industry **has shifted a lot from returnable to non-returnable packaging which is perceived as contrary to current** waste and waste policy **objectives** to promote reduction and reuse.
- Improperly discarded empties are **highly visible in the environment**.
- Many REP programmes have focused mainly on source separation for household packaging while a **high percentage (close to 50% in some markets) of beverages are consumed outside the home**.
- The **empty non-returnable bottle has become something of an icon of waste and pollution** for many environmental activists and for some of the public.

Beverage producers have been among the early promoters and adopters of SRP and there are many economic and environmental benefits to be gained from managing beverage containers along with all other post-consumer packaging within comprehensive SRP programmes. While the exact percentages will vary from market to market, where aluminium cans and PET bottles are collected along with all other consumer containers and packaging, these materials may represent less than 10% of the total mix by weight but typically more than 20% of total programme revenues.

However, in some jurisdictions, beverage containers are managed through a deposit and return system (DRS), either voluntarily by beverage producers or by regulation, where the consumer pays a financial deposit at the point of sale and is refunded the deposit when the empty container is returned to a designated redemption centre.

The RDS has been shown to be effective in achieving high recycling rates for beverage cartons including and operates separately from, and sometimes in parallel with, comprehensive REP programmes for containers and packaging.

The operating costs of the system are largely covered by the non-refundable deposits of non-returned packaging and from the sale of the recovered metal, glass, plastic and cardboard materials returned. In contrast, in the REP, the producer is charged directly for the costs of managing used packaging and containers. These costs are managed in the same way as other similar business costs for raw materials, energy, labour, transport, marketing, among others.

1.5 Main features of the REP programmes

Voluntary and legislated REP programmes exist. There are many examples of voluntary producer-supported and financed programmes to increase packaging recycling. They can be operated by individual mass product companies; by packaging producers (e.g. glass, aluminium); by industry sectors (e.g. beverage producers); or by industry coalitions (e.g. ECOCE in Mexico, Reciclame in Peru).

With regard to **legislated programmes, REP programmes operating at national level and with ambitious recovery and recycling targets are almost always supported by legislation.** Well-drafted REP legislation for packaging should:

- define the obligated producer;
- clearly define which packaging is required;
- promote a level playing field for all producers providing packaging in the market;
- define the legal/fiscal instrument that enables the transfer of resources from producers to recovery systems; define clear goals
- and objectives to be achieved by all obligated parties (including municipalities); enable the formation of a lead producer
- agency (or agencies - RFOs) with clearly defined powers; and
- ensure effective and transparent monitoring and reporting.

One or more government agencies (such as Environmental Protection) may be empowered under the legislation to provide oversight, monitoring and enforcement of the entire REP system. Generally, producers will be required to report to a government agency, an RFB or both, the total quantities and types of packaging they supply to the market.

The main role of the Producer Responsibility Organisation (PRO) is to:

- register all obligated producers and collect information on all packaging supplied to the market. develop an implementation
- plan and mechanisms to achieve the recovery and recycling targets set by the government; define a methodology for
- setting fees, collect fees from all obligated producers and manage directly these programme funds;
- make contracts with municipalities, recycling organisations and commercial entities to implement and manage recycling services (i.e. collection, sorting and recycling);
- provide overall programme management, promotion and education programmes; and
- report back to producers, government and other key stakeholders.

Municipalities will generally play a key role in the operation of packaging recycling collection programmes, either directly or by contracting recycling organisations and waste management companies. Well-designed incentives are built into the REP programme structure and fee-setting methodology to drive increased collection and recycling in the most effective way possible.

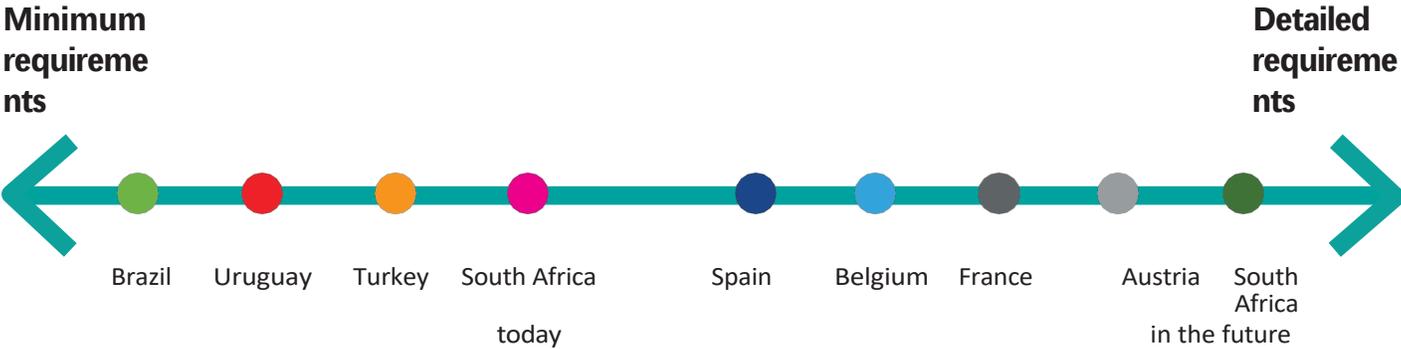
Many different versions of the basic REP model have been implemented considering and reflecting local conditions and needs. One of the main characteristics that distinguishes these various approaches is the degree of responsibility that the legislation places directly on producers to drive higher recycling rates.

These differences are shown in **table 1-4** below.

Basic level REPs Minimum requirements of the producer	More standardised REPs Requirements for the producer
Voluntary actions.	Legal obligations for producers.
Overall programme goals and objectives.	High material-specific recovery targets.
Fees not related to type of material.	Differentiated rates according to type of packaging material.
Low producer participation in recovery and recycling costs.	Increased levels of producer financing.
Locally unique variations in collection programmes.	Standardised collection programmes.
Focus on initial recycling collection.	Focus on programme optimisation and cost control mechanisms.
Promotion & local education and specific material.	Local and national advocacy and education campaigns.
Low company participation rates.	High rates of mandatory company participation.
Individual recycling programmes are responsible for marketing recyclable materials.	Producers are those who own and market recyclable materials.
No incentives/requirements for packaging optimisation.	Incentives/requirements for packaging optimisation.
Data reported by unaudited producers.	Detailed reporting and audits.
There are no enforcement mechanisms.	Legal and commercial enforcement mechanisms.

Figure 1-1 below places the nine benchmark jurisdictions that have been studied in depth for this project on a continuum according to the key differences identified in **table 1-4**.

Illustration 1-1: REP continuum for packaging requirements.



Note: Ecuador was excluded from Figure 1-1 as it is a tax system and not a REP programme.

1.6 REPs for packaging in the LAC region

In developing the database of reference countries provided in this report (Appendix 2), the range of programmes examined can be characterised as follows:

- REP complete regulated
- Regulated shared producer responsibility. Voluntary
- producer self-administered programmes. Packaging tax
- programmes.

In LAC there is a wide range of producer-supported programmes to improve recovery and recycling. packaging and more are emerging. However, to the knowledge of the project team, there are no examples of full REPs for packaging in operation in LAC. Chile, however, is in the process of implementing a legal framework for REPs that more closely resembles a more regulated approach existing in other developed/OECD countries, which includes:

- A Legislative Framework for Waste Management, Extended Producer Responsibility and Support for Recycling (2016) that imposes full producer responsibility for six "priority products" including packaging.
- A regulated process for setting targets and other performance measures for priority outputs set by law (the targets for priority materials are imminent).
- Establishment of a Recycling Fund (2017) for municipal projects with a mandate to promote reduction, reuse, recycling and separation of waste at source.
- A regulated requirement for producers to register through the Ministry of Environment's website, report their sales for the last year and report their current waste recovery activities.
- A recent regulation bans retailers from using plastic bags.

The REP legislation also addresses a key concern of the IRR and that is that it provides for the inclusion of grassroots recyclers through:

- The requirement for grassroots recyclers to register with the state and become certified under the National Certification System. of Labour Competences, and
- The establishment of a target (albeit modest) of 100 certified waste collectors by March 2018.

Uruguay has a legislated producer responsibility programme for packaging in place and is included in the group of reference countries.

1.7 Mapping the LAC packaging industry's vision for REPs

The project team collected insights from a group of industry representatives in LAC who gathered in Bogota, Colombia on 13-14 March 2018 to attend the event "Latin America Recycles: Regional Summit on Inclusive Recycling Systems in Latin America and the Caribbean" organised by the Regional Initiative for Inclusive Recycling.

(IRR). These views are summarised in **table 1-5** below.

In-depth interviews were conducted during field visits and through telephone interviews. It should be noted that, in order to encourage open and frank input from interviewees, the project consultants agreed not to assign the comments provided to any particular individual.

Table 1-5: Views of packaging industry representatives in LAC on REPs

Participant interviewed	Current programmes	Changes to consider	Major implementation in LAC
Producer 1 Brazil	<ul style="list-style-type: none"> Cooperatives stagnating in number and productivity. The vast majority of waste collectors are not in cooperatives. 	<ul style="list-style-type: none"> Need to broaden the company's participation in the Sectoral Agreement. It needs a new platform to coordinate producer activities to improve results. 	<ul style="list-style-type: none"> It needs REPs or alternative approaches for LAC that reflect the particular rights and social needs of grassroots harvesters.
Producer 2 and Partnership 1 Brazil	<ul style="list-style-type: none"> Very few companies actively participate in the Packaging Sector Agreement. There are no consequences for not participating. Unequal conditions. Insufficient resources to promote recycling. 	<ul style="list-style-type: none"> The government should focus on requiring all companies to participate. Considering joining the platform proposed by the leading FMCG company. Companies are resisting the idea of a REP fee model given the concerns that There is a need to safeguard the funds collected. 	<ul style="list-style-type: none"> Need REP or alternative approaches for LAC that reflect the particular rights and social needs of grassroots harvesters.
Partnership 2 Brazil	<ul style="list-style-type: none"> Plastic packaging is only a small component of all plastics manufactured. Very few opportunities for recycling in Brazil. 	<ul style="list-style-type: none"> It needs more incentives to develop markets for plastic materials. Concerns about possible implementation and control of REP fees by the government. 	<ul style="list-style-type: none"> Open to ideas on how to adapt REP to LAC's own characteristics.
Producer 3 Brazil	<ul style="list-style-type: none"> Most companies in Brazil do not agree on a REP model given the impact of high costs. 	<ul style="list-style-type: none"> Considering alternative approaches such as incentive payments at support prices for materials with low recycling rates. 	<ul style="list-style-type: none"> Willingness to work with other producers to establish a more coordinated platform.

Participant interviewed	Current programmes	Changes to consider	Major implementation in LAC
Partnership 3 Brazil	<ul style="list-style-type: none"> There are shortcomings in the existing model related to low producer participation. Cautious about pursuing alternative REP approaches given the risks associated with creating a centralised fund (whether producer or government controlled). 	<ul style="list-style-type: none"> Revise the existing model in a way that requires a contribution from all producers. Greater coordination of the individual actions and contributions of each company would be useful. 	<ul style="list-style-type: none"> The reality of LAC requires an inclusive approach for waste pickers.
Association 4 Uruguay	<ul style="list-style-type: none"> Producers do not have a decisive say in the current programme. The intrinsic value of the material is not enough to promote social inclusion. Social inclusion is a separate objective from increasing recycling (but they can cooperate). 	<ul style="list-style-type: none"> The government established a tax on packaged products as an alternative to the existing REP programme. No case studies were presented as a basis for the proposed rates. A significant increase in producer costs without a clear plan for how the funds will be used. 	<ul style="list-style-type: none"> Need to reconcile the social goals of REP/recycling funding approaches with the need for more effective and efficient recycling programmes.
Association 5 Uruguay	<ul style="list-style-type: none"> The existing management structure leaves producers with a minority influence. The government's focus on the social goals of developing waste collection co-operatives conflicts with the industry's focus on increasing recycling rates and improving efficiencies. 	<ul style="list-style-type: none"> Need to correct existing obstacles to improve recycling rates and programme efficiency. Evaluating the use of compostable plastic as an alternative to recycling. Much more effort is needed to educate and motivate consumers to participate. Need to rationalise collection systems and promote more door-to-door collection. 	<ul style="list-style-type: none"> Need for greater focus on developing domestic markets for recovered materials. Collapse in local markets for glass. More limited options for exporting collected materials.
Producer 4 Chile	<ul style="list-style-type: none"> Initial targets should contain a minimum differentiation of materials until a collection and processing infrastructure is developed. The return to retail premises should play an important role given the lack of municipal infrastructure. 	<ul style="list-style-type: none"> Need for requirements on municipalities to implement recycling programmes and achieve recycling targets. 	
Association 6 (Chile)	<ul style="list-style-type: none"> Initial targets should be limited to broad categories (plastics, paper/cardboard, glass, metal, wood). 	<ul style="list-style-type: none"> Need for more information on what is in the waste stream. 	<ul style="list-style-type: none"> Implement door-to-door collection to ensure consumer participation. The role of the collectors should be at the sorting stage (and not at the collection stage).

Comparative analysis

This section is based on information collected from the database of nine benchmark countries (Appendix 2).

2.1 Groupings of reference jurisdictions

The nine benchmark countries analysed in detail in this report can be grouped according to the key characteristics most relevant to this study:

REP complete regulated	
Austria (AU)	Full financial responsibility of the producer; RFOs compete with each other.
Belgium (BE)	Full financial responsibility of the producer; a single producer-controlled RFO.

Regulated shared producer responsibility	
France (FR)	Producers pay 80% of the costs of packaging recycling; a single RFO (at present).
Spain (ES)	Producers pay the incremental costs of packaging recycling; a single RFO.
Turkey (TU)	Producers must meet minimum packaging recycling targets; RFOs compete with each other.
Uruguay (UR)	Producers share costs based on a specific programme; a single RFO.

Voluntary producer self-administered programmes	
Brazil (BR)	Negotiated packaging recycling target; voluntary participation of companies.
South Africa (SA)	Voluntary support from industry; organised on the basis of type of packaging material.

2.2 Municipal solid waste management

While there are differences in reporting and calculation methodologies, the information below represents the best possible estimates of how municipal solid waste (MSW) is managed in each country of reference.

2.2.1 Municipal solid waste treatment for the relevant jurisdictions

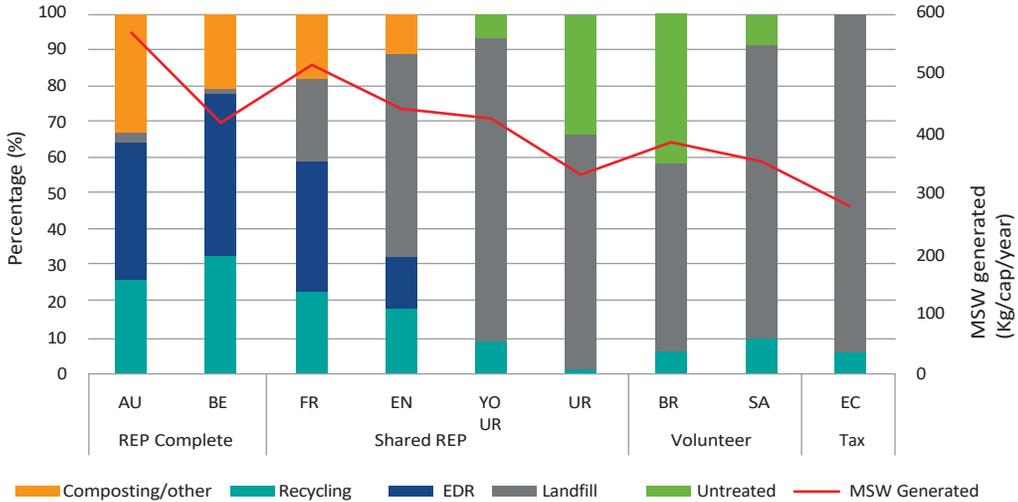
Table 2-1: Treatment of municipal solid waste.

	REP total		Shared REP				Volunteer		Tax
	AU	BE	FR	EN	YOUR	UR	BR	SA	EC
MSW generated (kg/cap/year)	564	420	510	443	426	335	338	349	279
Recycled	26	33	23	18	9	1	6	10	6
EDR	38	45	36	14	≈	≈	≈	≈	≈
Composting/other	34	21	18	12	≈	≈	≈	≈	≈
% Untreated	≈	≈	≈	≈	7	34	42	9	≈
Landfills	3	1	23	57	84	65	52	81	94

Notes:

1. EDR= Energy from Waste.
2. ≈ = not reported/not available.
3. "Untreated" refers to estimates of waste not collected; open dumped; or disposed of in informal landfills.
4. The information from Uruguay, Brazil, South Africa and Ecuador is the best possible estimate of the project team based on the information available and should not be quoted as official numbers.

Illustration 2-1: Municipal waste treatment in benchmark countries



2.2.2 Municipal solid waste analysis

- The two countries with full REP programmes (for products and packaging) show higher recycling rates than the other three models (shared REP, voluntary producer responsibility and taxation programme). However, there are many other factors at play in terms of national waste management policies, level of implementation, costs, degree of consumer awareness, etc.).
- The greater the responsibility assigned to producers in shared REP schemes, the higher the recycling rates achieved. However, there are many other factors at play in terms of national waste management policies, waste management costs, the range of products and packaging mandated in REP programmes, etc.

2.2.3 European Union (EU) and energy from waste (EDR) policies

- European waste diversion rates are underpinned by an integrated EU policy scheme that sets minimum requirements for all member countries, including:
 - A waste framework directive that provides the general framework of waste management requirements and establishes the basic definitions of waste management for the EU. It sets priorities for all waste landfill alternatives.
 - Waste Incineration Directive.
 - Waste Landfill Directive.
 - REP legislation in specific waste streams (i.e. cars, WEEE, packaging).
- In addition to promoting EDR and recycling, these policies have promoted increased investments in mechanical and biological treatment (MBT) infrastructure as an alternative waste management option.
- Each member country may incorporate national regulations for other waste products (i.e. batteries, oils, fuels, etc.). lubricants, organics, etc.) and set higher diversion targets than those set by EU directives.
- **Other waste policies, including bans on the disposal of untreated waste and on designated products and packaging, as well as higher landfill costs, have led to significant investments in energy from waste (EfW) treatment.** In general, the highest rates of EDR are found in Northern Europe, dropping markedly in Southern European countries. The **main causes for the prevalence of EDR in Northern Europe** include:

Reduced availability of land for the development of large-scale landfills, composting operations, etc., at an acceptable cost.

- Higher **labour costs and** associated **social obligations** make less labour-intensive/higher technology solutions a more economically attractive option.
- Early adoption of **EDR district heating systems** as an alternative to the use of fossil fuels.
- Public policy analysis that, under local conditions, EDR can provide a more economically and environmentally cost-effective alternative to recycling some packaging waste for which there are not yet viable technical or commercial recycling solutions (such as packaging containing toxic materials or wastes) or for which the costs of recycling may be higher than the costs of managing it through an EDR plant (such as polystyrene foam and multi-material laminated bags).
- **The use of EDR as a primary method for diverting waste from landfills may be reduced in the future given the following:**
 - **Stricter air emission requirements;** setting minimum energy conversion standards; and requiring disposal of incinerator ash in toxic waste facilities; established in EDR facilities under the incineration directive which has led to the closure of some older facilities and increased costs of new facilities.
 - The new EU **Circular Economy Package (CEP)**², with the following main features:
 - **Municipal waste reuse and recycling target: 55% by 2025, 60% by 2030 and 65% by 2035.**
 - **The elimination of EU targets for packaging recovery (incineration).**
 - Organic waste (i.e. food scraps) should be collected separately or recycled at source (e.g. composting) domestic) as of 31 December 2023.
 - Separate collection of textiles and toxic waste from households by 01 January 2025.
 - **A new directive on packaging and packaging waste**, which sets a waste recycling target of packaging of 65% by 2015 and 70% by 2030.
 - **A plastics strategy**, which aims to make all plastic packaging recyclable by 2030, a strategy for disposable products that includes bans on some products, as well as a proposal, not yet launched, to set a plastics tax if recycling performance does not meet targets. The focus of these two initiatives is to provide strong financial and regulatory incentives for producers to redesign the formats of their products. packaging to reduce resource consumption; design innovative reusable packaging solutions; eliminate substances and materials that impede the recycling of other materials; and design to post-use recycling.
 - **Corporate social responsibility and waste management policies of major FMCG companies that support (a) recycling over EDR; and (b) source separated recycling over mixed waste sorting.**
- However, it should be noted that the proposal for revised EU legislation on waste sets a binding target to **reduce landfill to a maximum of 10% of municipal waste by 2030**. According to an industry expert, in this context the EU looks set to have more, not less, incineration. One possible outcome of this may be the increase of mixed waste recovery facilities, where sorting will occur before sending for incineration. Without this practice, it will be very difficult for municipalities to achieve high municipal waste recycling targets.

²See the note issued by the Council of the European Union published on 22 May 2018.

2.3 Scope of producer-related packaging recycling programme

2.3.1 Scope of programmes in the reference jurisdictions

Table 2-2: Extent of packaging recycling programmes

	Full REP		Shared REP				Volunteer		Tax
	AU	BE	FR	EN	YOUR	UR	BR	SA	EC
% population covered by the programme	100	100	99	100	31	70	20 - 50??	30 to 60??	100
Producer participation ¹	95	95	95	95	<50	75+??	<10	NA	100
Packaging included ²	All	All	Cons.	Cons.	Cons.	Cons.	Cons.	Cons.	Beverage PET
Years of operation	20	20+	20+	20	13	10	3 ³	2- 15 ⁴	5

Notes:

- 1) Total sales participating with rough estimates of the programme for de minimis & free riders.
- 2) Cons" means consumer packaging which may be limited to "household" packaging only, or may be limited to "household" packaging only. include all types of consumer packaging wherever it is generated.
- 3) Three years of the Sectoral Agreement for Packaging but the CEMPRE Brazil Programme has been in operation for 25 years.
- 4) Varies according to the type of individual material (PET, paper, glass, aluminium, etc).

2.3.2 Analysing the scope of packaging recycling programmes

- In countries where SRP legislation for packaging has been implemented (with full or shared responsibility) - such as Austria, Belgium, France and Uruguay - producers are generally required to set up recycling programmes at the national level. However, in many countries, producers have been permitted to implement these programmes gradually over a number of years (as was the case in France, Spain and Uruguay).
- In those countries where a minimum recycling rate is set without reference to minimum accessibility requirements (such as in Turkey), producers only have to recover and recycle a minimum amount of packaging regardless of the source (i.e. from household or industrial waste, commercial waste). Therefore, it may not be necessary to provide national recycling collection coverage to achieve the targets.
- Well-drafted REP legislation, combined with strong state legal institutions and adequate funding for enforcement, can generate high levels of producer participation (based on the total amount of packaging provided on the market), although
 - provision is usually made by exempting smaller companies (which may account for 2% to 10% of the total packaging waste generated); and
 - some companies, especially those that market primarily through the internet or via the catalogue, they may avoid participation (and are categorised as free riders).
- In countries where legislation and state enforcement capacity are weak, or where the programme relies on voluntary participation by companies, producer participation is markedly lower.
- In many countries producers are only obliged to "domestic" (or final consumer packaging) or in some cases individual producers must achieve recycling targets for industrial, commercial and institutional packaging by their own means. However, in practice it is difficult to accurately monitor where the recovered packaging was generated or to determine where the final packaging was consumed/generated (i.e. beverage containers that are consumed at home, at work, or at a picnic are usually indistinguishable). This is particularly difficult in countries where grassroots recyclers are the main actors in packaging waste recovery.
- Implementing comprehensive packaging recycling programmes at the national level is a significant challenge involving many actors in the economy. The age of the formal programme also has an impact on the extent of participation and the programme results achieved.

2.4 Packaging Recycling Performance

2.4.1 Packaging recycling performance in the benchmark jurisdictions

Table 2-3: Packaging Recycling Performance in Benchmark Jurisdictions

	Full REP		Shared REP				Volunteer		Tax
	AU	BE	FR	EN	YOUR	UR	BR	SA	EC
Recycling rate (%) for all types of packaging - National.	67	81	68	76	NA	30	50?	58	?
Recycling rate (%) for all types of recycling - As a result of the producer-related programme.	67	81	68	76	54	3	<5-10?	NA	2
Recycling rate of specific material (%) - As a result of the producer-related programme									
Paper	85	81	65	82	54	?	?	67	NA
PET/bottles & jars	34	75	56	67	54	?	?	58	80
Other plastics	34	36	3	67	54	NA	NA	45	NA
Cartons	NA	98	51	NA	54	NA	?	NA	NA
Aluminium	87	98	43	85	54	NA	?	73	NA
Steel	87	98	100	85	54	?	?	73	NA
Glass	86	100	86	70	54	0	?	43	NA
Multi-material	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

- 1) NA: Not Applicable or Not Available.
- 2) "Multi-material" refers to types of packaging made of multiple materials, such as flat-bottom bags and sachets, and represents the fastest growing packaging type in most markets. As no commercial recycling solution has yet been developed for these, their recycling performance is generally not reported.
- 3) In the case of Turkey, recycling rates for specific materials are periodically set by regulation and RFOs are required to provide evidence that they have achieved these rates, which they do by obtaining recycling certificates equivalent to the targets.
- 4) South Africa's performance includes all sectors (residential, institutional, commercial and industrial - IC&I).
- 5) Individual performance for PET/bottles and bottles vs. other plastics is not available for Austria. Performance for plastics in Austria is notably lower than in other European countries due to two reasons. First, the reported performance corresponds to both residential (household) and IC&I packaging waste, whereas in other countries it corresponds to the residential sector only. Since the IC&I sector generally does not perform as well as the residential sector, this has a decreasing effect on the reported performance. The other reason is that plastic bottles (and not other plastic containers and packaging) are only collected for recycling in one third of the country where waste is mainly managed in waste-to-energy (WTE) facilities (i.e. Vienna). Non-bottle plastics are processed in the mixed waste stream going to EPR in this part of the country.
- 6) "Other plastics" do not perform as well as PET/bottles and bottles in Belgium because only PET and HDPE bottles are accepted for recycling (other plastics are not, at present). However, this is changing. The collection of all plastics will be gradually extended to the whole country from 2019, within two years.

Illustration 2-2: Recycling performance attributable to the producer-related programme for selected materials.



2.4.2 Packaging performance analysis

- To understand the effectiveness of REP policies on packaging recycling rates and in particular their potential impact on grassroots recyclers, it is necessary to distinguish between packaging recycling rates achieved at the national level from recycling rates directly attributable to the producer-related programme.

- Informal recycling occurs to some extent in all benchmark countries.

- In the European cases analysed (Austria, Belgium, France, Spain) grassroots recyclers have been pushed out of mandatory packaging recovery as these materials are mainly integrated into waste management systems run by municipalities (usually collected close to the source of generation; often using containers that make the materials more difficult to access; and usually supported by local regulations that veto access to the materials outside the programme).

Where there are already large numbers of grassroots recyclers in operation; where there are waste management and recycling programmes administered by municipalities; where there are no household recycling affordability requirements or collection standards; where easily recoverable packaging waste sources from the IC&I sector can be used to meet minimum packaging recycling targets; or where the primary focus of the programme is on social objectives (i.e. improving the livelihoods of grassroots recyclers); the results directly attributable to the producer-related programme may be modest even where higher national recycling rates are being achieved (such as where the producer-related programme has a higher national recycling rate than the IC&I sector, such as where the producer-related programme has a higher national recycling rate). e.g. improving the livelihoods of grassroots recyclers); the results directly attributable to the producer-related programme may be modest even where higher national recycling rates of packaging material are

- being achieved (as in the case of aluminium).

It also highlights that, where legal requirements imposed on producers for packaging waste management are low, there is generally less available/reliable information on packaging waste generation and treatment.

2.5 Producer Support Programme for Inclusive Recycling

2.5.1 Producer support programme for inclusive recycling performance

Table 2-4: Programme support for inclusive recycling performance

	Full REP		Shared REP				Volunteer		Tax
	BE	AU	FR	EN	YOUR	UR	BR	SA	EC
Is there a policy in place?	NO	NO	NO	NO	NO	Yes - the plans to producer responsibility should include grassroots collectors.	Yes - Programme priority. Other incentives are also available governmental.	There is no policy but some support (e.g. equipment) is provided. Main focus is on increasing market demand. for recycled materials.	High-level policy to incorporate grassroots collectors in municipal waste services solid. Secondary objective of the government to increase the income of grassroots collectors through of a PET tax.
Formal involvement of waste collectors.						250 direct contracts	Capital, technical, promotional support for cooperatives & collection.	The regulations require that individual programmes The waste management plans should specify how they will integrate grassroots waste pickers.	10% of grassroots collectors in Quito & Cuenca for the provision of recycling services (not related to PET levy)
Recovery of containers and packaging by collectors basic.	Very low They capture from formal programmes (considered as theft by the programme).	Very low They capture from programme containers.	Under They capture some of the formal programmes.	Under They capture some of the formal programmes.	High - about 70% of materials The packaging waste collected is attributable to grassroots collectors, despite the fact that the law prohibits RFOs from using packaging waste obtained from grassroots collectors for their targets.	High Main focus of the formal programme. Other grassroots collectors scavenge from formal programmes.	High Main focus of the formal programme. Other grassroots collectors scavenge from formal programmes. Many collectors are outside the formal programme.	High Driven by better material prices for most packaging materials and extensive repurchase networks.	High Best PET prices. Unknown quantity coming from outside the country that can be collected by grassroots collectors.

2.5.2 Producer Support Programme for Inclusive Recycling

- A basic principle of the REP policy is that producers are obliged to reach defined recycling and affordability targets of the programme but can define for themselves how best to reach these targets and how to finance the programme activities.
- Producer-driven programmes, especially those where all financial and operational responsibility is assigned to the producer, tend to treat the task primarily as a materials management challenge and seek to implement large-scale technical solutions; achieve high recycling rates as efficiently as possible; backed by formal contractual agreements with municipalities, waste management companies and the recycling industry.
- In some countries (such as Turkey) where there is limited infrastructure for municipal recycling programmes; where producers were not initially required to establish such programmes; and where there is a large population of grassroots collectors and well-established recycling networks, the continued participation of grassroots recyclers may represent the most effective option for producers to achieve their programme goals regardless of the intent of regulations.
- Where governments involve producers primarily as a means to raise funds to support recycling programmes and to achieve related social policy objectives such as improving the role and livelihoods of grassroots waste pickers; and where the main operational decision-making power over programmes remains in the hands of the state (as in Ecuador and Uruguay); the role of the producer is more limited and governments are highly accountable for achieving the results of the programme.
programme.
- Where no specific requirements are set for producers to achieve well-defined programme outcomes (beyond a government-dictated target of increasing **p a c k a g i n g** recycling rates, as in South Africa); or where a general packaging recycling target is set for "the industry as a whole" but each producer is free to take individual action as they see fit.
(as in Brazil), grassroots waste pickers remain the backbone of the national recycling collection s y s t e m .

2.6 Programme costs

2.6.1 Programme costs in the benchmark countries

Table 2-5: Programme costs and material fee rates (USD)

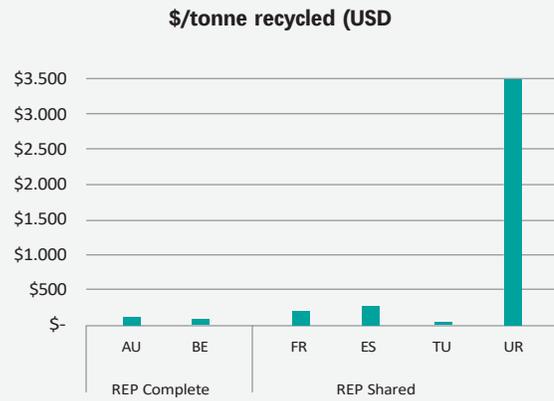
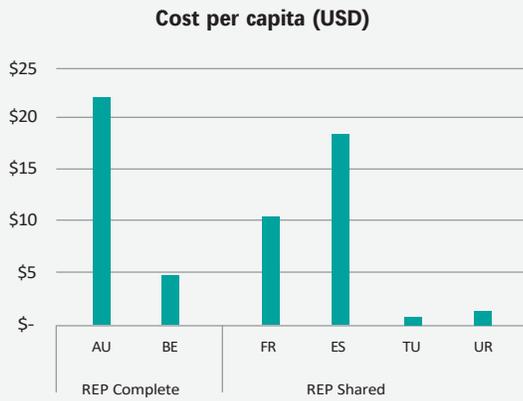
	Full REP		Shared REP				Volunteer		Tax
	AU	BE	FR	EN	YOUR	UR	BR	SA	EC
\$/capita (USD)	22.45 ¹	117	10.21	13.06	0.70	1.18	NA Minimal	NA	NA
\$/tonne recycled per programme (USD)	227 ¹	4.82	215	291	30	3,500	NA	562	\$1553
USD average quota/kg ⁴	0.1583	0.009266	0.1460	0.0869	NA	0.05			

	Full REP		Shared REP				Volunteer		Tax
	AU	BE	FR	EN	YOUR	UR	BR	SA	EC
USD average quota/kg ⁴ (Producer contribution)									
Paper	0.0307	0.1008	0.1979	0.0825		0.05			
PET	0.3976	0.7648	0.3791	0.4576	0.027	0.05		0.05 ⁵	0.08 ⁵
Plastics	0.3976	0.7648	0.3791	0.5730	0.027	0.05			
Cartons	0.3841	0.7041	0.3003	0.3921	0.007	0.05			
Aluminium	0.0543	0.3763	0.1260	0.1238	0.069	0.05			
Steel	0.1838	0.3338	0.0538	0.1032	0.024	0.05			
Glass	0.0331	0.0983	0.0172	0.0257	0.037	0.05			

Notes:

- 1) Consumer packaging & IC&I combined.
 - 2) The reported cost per tonne (\$56) is for PET only and reflects PETCO's annual budget divided by the total amount of PET collected in the country.
 - 3) The reported cost per tonne (\$155) is for PET only and was obtained by dividing the annual government deficit in 2012-2014 by the tonnes of PET recovered in 2013.
 - 4) Not all quota index categories are shown for all countries.
 - 5) The average PET quota rate per kg for South Africa and Ecuador was calculated using the average unit weight of a PET bottle (24 grams, an average of the different PET bottle volumes on the market).
 - 6) The exchange rate used for \$/capita and \$/tonne recycled is 1.11 Euro per USD; the exchange rate used for average fees is 1.2139 Euro per USD.
- USD.

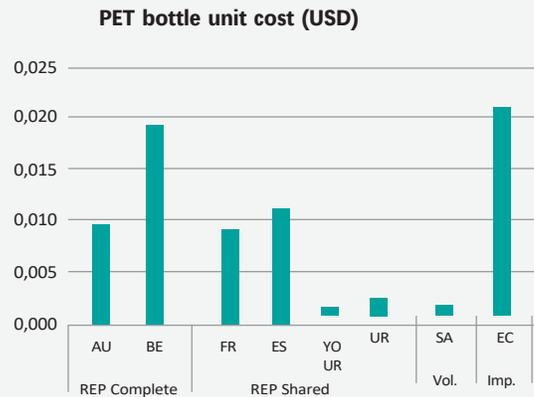
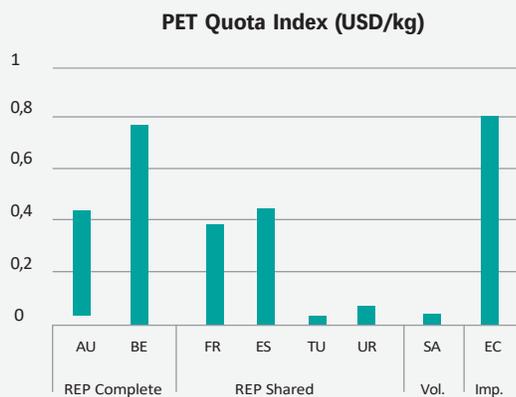
Illustration 2-3: Programme Cost Metrics



The graphs presented in figure 2-4 below provide an illustrative example of the PET quota index (in USD/kg) and how this translates into a unit quota (in USD per bottle).

PET was chosen because information was available for 8 of the 9 reference jurisdictions and because the approximate average weight of a PET bottle was readily available.

Figure 2-4: PET fee index and unit cost in the reference jurisdictions



2.6.2 Programme cost analysis

- In non-legislated REP programmes, such as in Brazil, it is not possible to obtain detailed comparative cost information.

While one might intuitively expect that shared responsibility models would generally have lower fee rates than full responsibility models, this is not always the case. **Beyond the degree of responsibility, the scope of the programme (residential only vs. all types of packaging; and the range of materials collected as part of the programme) may be more important determinants of costs.**

It may also reflect the importance of promoting common approaches to collection, rather than individual communities designing and operating their own small-scale and diverse programmes. By assigning full responsibility to producers, they are able to drive economies of scale.

In line with the thinking behind the **REP policy**, the financing mechanism - i.e. the material-specific fees charged to producers - is supposed to **reflect the actual cost of managing each type of material, thus providing an economic signal to the producer of which materials are easier/less costly to recycle.** In those programmes that have opted for a single fee rate for all materials (as in Uruguay), this signal to the producer is lost and there is no incentive to change packaging design or choose materials that are easier/less costly to recycle or make improvements to packaging to improve its recyclability.

In summary, there are too many factors at play (materials included; permitted management methods; recycling rates achieved; effective monitoring and enforcement; etc.) to draw firm conclusions from this study covering nine different jurisdictions. It is also noteworthy that international organisations such as PRO Europe and EXPRA, whose members have decades of experience in managing national REP programmes for packaging, have been able to provide a number of examples of how they have managed their own national REP programmes for packaging. In dozens of countries, have not been able to establish "best practice" approaches or cost-effective cost management. The REP for packaging given the myriad of factors involved in REP programmes and the differences between jurisdictions.

3. Conclusions and recommendations

3.1 Is REP an appropriate policy to implement in LAC?

EPR for packaging is already being implemented in Uruguay and Chile and to some extent in Brazil and is being considered by governments in Argentina, Colombia and probably in other LAC countries. LAC comprises a wide range of national conditions and it would not be appropriate at the level of this study to make specific recommendations on the appropriateness of SRP policies for any particular country. This is best done through an in-depth analysis of local legal structures; waste management policies; local waste management and recycling infrastructure and capacities; and through multi-stakeholder dialogue.

The assessment of jurisdictions reviewed in this study (combined with the project team's experience with REP policies in other markets) suggests that **implementing REPs for packaging can provide environmental and waste management benefits in LAC:**

- More resources are diverted from waste to beneficial uses for the production of new products.
 - Demand for alternative virgin resources is low.
 - Citizens' awareness of waste management issues is increasing and they are motivated to take action. actions to sort recoverable materials for recycling.
 - Producers are encouraged to reduce the amount of materials used and to design packaging that is easier to recycle.
 - An effective and efficient scheme can be developed at the national level to significantly increase recovery. and recycling of packaging materials.
 - Reduced landfill and improper disposal of used packaging and packaging into the terrestrial and marine environments.
- REP policies are extended to include other products and materials, especially those that may pose a
- greater environmental risk than used packaging.

In addition, the **design and implementation of appropriate REP policies can also bring economic and social benefits.** **social issues** that result from:

- Job creation, as managing used packaging as a recoverable resource requires far more workers than disposing of these materials as waste.
- New capital investments that will be required along the entire recycling chain.
- Technological and process innovation in materials handling and processing and end-use industries.
- Increased quantities of higher quality secondary resources generated on a reliable basis that can support the creation of new recycling manufacturing operations or replace the use of primary materials in existing construction, manufacturing and industrial operations.
- Reduce the import of waste materials from other jurisdictions that are now used to provide raw materials for domestic industries.
- The potential to move grassroots waste pickers into the formal economy and improve their health and well-being. Provide new tax revenues for the government from increased economic activity.

While the affected industries (producers) in LAC (and in other parts of the world) have often opposed proposed REP policies for packaging on various grounds (i.e. While the affected industries (producers in LAC (and elsewhere in the world) have often opposed proposed SRP policies for packaging on various grounds (i.e. as an unnecessary "tax" on business; increased costs to the company that may jeopardise its economic viability; the potential to increase prices to the consumer in general; that a company's confidential sales or market share information risks being exposed; etc.), it is indicative that SRP for packaging has been successfully implemented under a wide range of economic, social, cultural and geographic conditions around the world.

On the other hand, while SRP programmes for first generation packaging generally undergo modifications over time to improve their performance or effectiveness, **this study has not identified examples where SRP legislation has been repealed on the grounds that the costs incurred outweigh the benefits derived.** Nor were any cases cited of a producer or a product failing in the marketplace as a direct result of the implementation of a REP programme where a level playing field has been established for all producers.

3.2 If it is considered REP for packaging in an LAC country, what should it look like?

IRR has a clear commitment to improving the socio-economic status of grassroots waste pickers; facilitating their access to formal recycling markets; and promoting the development of public policy frameworks that support the integration of this population into formal waste management systems.

Based on the nine reference countries reviewed for this study and the project team's experience with REP programmes in other jurisdictions where governments choose to implement REP policies, the following recommendations are provided to support effective and efficient REP programme designs that can also support the achievement of these broader societal goals.

3.2.1 Key requirements of a REP programme

Legal framework

- 1. Producer participation should be mandated** by law to promote a level playing field for all companies supplying packaging to the market rather than relying on the voluntary actions of companies (e.g. Austria, Belgium, France, Spain, Uruguay).
- 2. A de minimis provision** should be **considered** (ideally linked to existing taxation/reporting policies in the country) for smaller businesses, either to exempt them from the programme or to provide for simplified reporting and a fixed price payment (e.g. Austria, France).
- 3. A national register** should be **established and producers should be obliged to report the quantities and types of containers and packaging they supply to the market**. There are successful examples of implementation of such registers managed directly by the industry concerned and by government agencies (e.g. Austria, Belgium, France, Spain, Uruguay, in the process of implementation in Chile).
- 4. Legally mandated packaging must include all consumer packaging** (also known as final consumer packaging or consumer packaging). personal) regardless of where they are generated (i.e. at home, schools, parks, institutions, etc.) (e.g. Austria, France). The feasibility and necessity of extending the obligation to include transport packaging and other industrial and commercial packaging has to be considered as a second phase.
- 5. Responsibility for the enforcement of REP legislation must remain with the government**, but, to ensure that this critical role is fulfilled, the **enforcement costs associated with the responsibilities of the government must be borne by the government**. (i.e. reporting, paying fees, achieving targets, etc.) should be assigned to producers and be included in the RFO's tariff/rate-setting methodology.

Roles and responsibilities

6. Where comprehensive waste management policies and municipal waste management infrastructure do not exist or are incomplete³, REP legislation for packaging should be a shared responsibility between producers and waste generators (including municipalities) as a means to ensure that the waste management infrastructure is in place. in Uruguay (albeit with changes required in programme design to make it more effective and efficient). A shared model allows provincial/municipal governments to retain autonomy for other social goals, which is more conducive to the inclusion of grassroots collectors.

7. Where waste management policies and municipal waste management infrastructure are well established, including for packaging waste, full financial and operational producer responsibility should be considered, consistent with REP practices in other markets. developed countries (e.g. Austria, Belgium). However, full producer responsibility is less inclusive of grassroots collectors if it is not directly incorporated in legislation.

8. Municipalities should be obliged to provide their citizens with the opportunity to classify recoverable materials (including containers and packaging) for recycling and to achieve minimum service standards. locally appropriate.

9. Producers should be obliged to achieve minimum REP programme targets at the individual level (i.e. recycling rates, accessibility, etc.) and should be allowed to meet these requirements by operating in a manner individual or through a collective producer responsibility organisation (PRO) to discharge their obligations (e.g. Austria, Belgium, France, Uruguay).

10. Where information on types and quantities of packaging and current rates of packaging and current rates of recycling is incomplete (e.g. Brazil, Ecuador, Chile), setting a "global" recycling target for all types of waste (e.g. Brazil, Ecuador, Chile), setting a packaging but set specific targets for materials (i.e. glass, cartons, composites, plastics by type, etc.) as soon as possible.

³Namely, where there is open dumping of waste or absence of engineered landfills; where a significant portion of households and other waste generators do not receive regular waste collection services; where there are no institutional or financial mechanisms to pay for modern municipal waste management services, etc.

11. Minimum requirements for the accreditation and operation of an RFO should be established (including, for example, the

following),

non-discrimination on the basis of company size, type of packaging material, method of fixing the packaging tariffs, data collection and reporting, etc.) E.g. Austria, Belgium, France.

12. A single RFO should be accredited for the first five years to facilitate design, implementation and accountability during the initial period. Accreditation should be reviewed every five years with performance targets.

revised based on experience to date.

13. In conjunction with the accreditation process, the RFO must, by obligation, develop a five-year implementation plan, reviewed and approved by the government and including at a minimum:

- a.** promotion and education programmes to support the separation of used packaging at source;
- b.** financial mechanisms to support producer participation in the operational and capital costs of the programme;
- c.** research and development initiatives to optimise the effectiveness and efficiency of the programme;
- d.** data collection and reporting;
- e.** annual performance targets;
- f.** implementing a fee-setting methodology that reflects the differential cost of managing individual rates of containers and packaging;
- g.** how programme funds will be collected and administered; and
- h.** its governance structure.

Producer financing

It is recommended that **producers retain the right to develop and manage the mechanism directly**. **financially** required to meet its REP programme obligations.

14. The structure of the **quota-setting methodology should include incentives for producers to make changes to their packaging that promote a reduction in the use of materials**; make changes to **their packaging that promote a reduction in the use of materials**; make the more recyclable packaging; and use more recycled content (e.g. France).

15. Once comprehensive packaging waste recycling systems have been implemented, it is necessary to complete an assessment of the potential costs and benefits of (a) changing the share of the responsibility (b) open up the market for RFO compliance to competition.

Inclusive recycling

16. The RFO should also be obliged to develop, in partnership with key federal, state and municipal government agencies (including industry development, training, health & welfare social services, waste management, education, finance, etc.), **a comprehensive and shared funding programme to facilitate the transition of grassroots recyclers to emerging formal recycling systems** and other economic enterprises where possible. This should take into consideration:

- **Access to capital** to invest in recycling equipment for existing recycling enterprises and cooperatives.
- **Training in materials management**, business development, health & safety, etc., for existing waste picker enterprises and co-operatives with the specific aim of helping them become a self-sufficient enterprise model consistent with local/national business standards.
- **Preferential hiring policies**, backed up with adequate training programmes aimed at motivating waste collectors to seek employment in formal recycling programmes, as well as in related non-recycling industries such as waste collection, street cleaning, general construction, etc., since, under a well-designed REP regime, formal recycling programmes seem to be the predominant approach to packaging recycling.

17. Mechanisms to discourage sorting of obligatory mixed waste packaging. This can include consideration of crediting progress towards achieving producer recycling targets for materials only recovered through recycling co-operatives that can meet minimum programme operating standards; through **source-separated collection programmes**; and through **state-approved and licensed sorting facilities**.

3.2.2 Additional programme considerations

In addition to the key requirements for effective packaging REP programmes cited above, other programme elements that have been shown to be effective in promoting effective packaging recycling schemes are:

Support for economic and market development

1. Producer and state investments to promote the development of domestic markets for the recycling of recovered packaging materials. While the majority of recovered packaging materials are recycled, the majority of recovered packaging materials are not recycled. For internationally traded products, the stability and effectiveness of national REP programmes are strengthened by supporting increased domestic consumption of recovered packaging materials.

2. Taxes and other financial incentives to promote greater use of recovered (secondary) materials, and potentially encourage the employment of grassroots waste pickers.

Improve the effectiveness and efficiency of the programme

3. Competitive tendering for recycling collection, processing and services. Experience has shown that, as formal recycling systems evolve, the effectiveness of the entire programme is improved by adopting competitive tendering for recycling services required for producer and government (e.g. Austria, Belgium).

4. Ensure alignment of national and sub-national REP policy and legislation. In some jurisdictions responsibility for waste management rests with the sub-national/regional level of government. In those places where REP legislation is implemented at the national level, it should be considered a requirement that state or regional REP policies are aligned.

5. Promote common approaches to packaging SRP at regional level. Given that many of the major producers operate internationally, consideration should be given to promoting common regional approaches for REPs in LAC where possible.

6. Increased exchange of information and experiences with other regions facing similar challenges to LAC in the implementation of REPs where extensive informal recycling is prevalent (i.e. Baltic countries, South East Asia, etc.) and Africa).

Motivating and educating citizens

7. Labelling on packaging to inform and motivate consumers to sort and recycle packaging and used packaging can be useful in promoting a culture of consumer recycling. This can be done by regulation or by means of financial incentives included in the methodology for setting producer quotas (by e.g. France).

8. Joint programmes between producers, government and NGOs to reduce the diversion of plastic packaging into the marine environment. This is a growing global concern and REP is a mechanism that can be used to address this issue. This problem in parallel with other community and governmental initiatives.

Promoting design for recycling

9. Mechanisms to discourage the use of some types of packaging materials (such as PVC labels or bottles) that may interfere with the recycling of other types of recyclable materials that compete with them (such as PET or HDPE). This can also be done by means of regulation or by incentives included in the methodology for setting producer quotas (e.g. France).



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