

# Post-consumer Waste in the Context of Mercosur

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**Abstract:** In the global scenario from the perspective of socio-environmental justice, the debate on the destination of post-consumer waste, especially those originating from fossil fuels, begins to consolidate. This analytical perspective is based on the consequences directly related to the product's life cycle, from its manufacture to its post-consumer waste. This text focuses on the case of Mercosur countries, which, in terms of waste, generally account for approximately 6% of the total global waste, close to 190 million tons per year, with a projection for 2050 of 300 million tons. Therefore, the debate is fundamental to contribute to the guidance of public policies for the post-consumer waste sector, highlighting that the concept of shared responsibility must be objectively delimited to develop a fair cycle dynamic of circular economy in Mercosur.

**Key words:** waste, post-consumer, Mercosur

The 2030 Agenda for Sustainable Development establishes among its objectives to ensure sustainable patterns of consumption and production (SDG 12), and one of its lines of action is linked to waste reduction through responsible consumption, avoiding their generation, which grows exponentially and directly affects the territory and quality of life in urban centers. Notably, among the main environmental impacts are those related to the proliferation of poorly managed waste deposits, causing both the generation of effluents or leachates and the emission of greenhouse gases.

The issue of post-consumer waste, on a global scale, is directly associated with the production and consumption patterns of a population. Thus, considering that the issue of post-consumer waste is a relevant topic with strong environmental and legal implications, this text analyzes public policies implemented through legal norms in the four Mercosur Member States.

Currently, the population of these member states is approximately 270.27 million, distributed as follows:

Brazil, 214.33 million; Argentina, 45.81 million; Paraguay, 6.70 million; and Uruguay, 3.43 million.

It is worth noting that 84% of Brazil's inhabitants live in urban areas; in Argentina, the percentage is 92%; in Paraguay, 62.9%; and in the case of Uruguay, 92% of the population lives in urban centers. In the cases of Argentina, Paraguay, and Uruguay, the capital city concentrates most of this population. In Brazil's case, the distribution is spatialized, mainly concentrated in the capitals of metropolitan regions.

Thus, in this context, the main territories in the generation of household waste are the main urban centers, as there is a direct relationship between the number of inhabitants and kilograms of waste produced.

According to the Solid Waste Panorama in Brazil 2021, each Brazilian generated an average of 1.043 kg of waste per day in 2022, meaning Brazil reached a total of approximately 81.8 million tons, which corresponds to 224,000 tons daily.

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<sup>1</sup> United Nations Conference on Human Development and the Environment, 1972; Brundtland Report, 1987; Montreal Convention, 1987; Establishment of the World Commission on Environment and Development, 1983; National Environmental Policy Law, 1981.

In the case of Argentina<sup>2</sup>, the average daily generation in 2022 was 1.15 kg per capita, representing about 49,300 tons per day and about 18 million tons per year. In the case of Paraguay, the per capita daily generation in 2022 was 1 kg/h/d, estimating that 7,000 tons of Urban Solid Waste are generated in Paraguay<sup>3</sup> per day, and in the case of Uruguay, the per Capita production is close to 1.1 kg/h/d, reaching 3,660 tons of waste per day, which corresponds to an approximate total of 1,335,000 tons per year.

Although these data are of a national nature, competence in waste management directly affects municipalities. Thus, the problem of waste management becomes exponentially territorial in scope because, in the Federative Republic of Brazil, there are 5,568 (IBGE) municipalities; in the Argentine Republic, 2,278 (CEPAL) are accounted for, but there are 5,000 open-air landfills, which means, on average, more than two landfills per municipality. The majority of them are formal, meaning it is the official technique by which local governments dispose of post-consumer waste. In the Republic of Paraguay, there are 220 municipalities, and in the Oriental Republic of Uruguay<sup>4</sup>, there are 125 municipalities.

This is why, although competence in post-consumer waste management corresponds to municipalities, the issue of management in general, and of open-air landfills in particular, is a concern at the national level, both due to the volume and scope as well as being one of the leading environmental problems of the Mercosur member countries.

Given this, it is necessary to analyze how environmental matters, especially the issue of post-consumer waste, have been addressed in the legal framework of Mercosur. At this point, the Treaty of

Asunción (1991) is the cornerstone of the legal framework of the member states, considering that to achieve the objective of accelerating their processes of economic development with social justice, there should be, among other measures, more effective use of available resources and environmental preservation.

Thus, from a legal standpoint, we highlight the role of the Common Market Group (GMC), the executive body of the Common Market, whose functions are to ensure compliance with the Treaty, having the competence to establish the Working Subgroups that are necessary to achieve its objectives, initially having 10 Subgroups, which are mentioned in Annex V of the treaty.

However, it is observed that all these subgroups are directly linked to the economic sector, such as Subgroup 1: Trade Matters, Subgroup 2: Customs Matters, Subgroup 3: Technical Standards, Subgroup 4: Trade-Related Fiscal and Monetary Policies, and Subgroup 10: Coordination of Macroeconomic Policies. In other words, environmental matters appeared in 1991 as an ancillary element, although the topic was already the subject of intense and deep international and national debate<sup>5</sup>.

However, in 1992, through Mercosur Common Market Group Resolution No. 22/92<sup>6</sup> and considering that it was necessary to analyze the existing legislation on environmental matters in the Member States and to coordinate their respective policies in MERCOSUR, as several Working Subgroups addressed the ecological issue in specific aspects related to their competences, and there was still the need for coordination of positions, the decision was made to create a particular forum that came to be called the Specialized Meeting on Environment (REMA).

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<sup>2</sup> Available online at: <https://www.argentina.gob.ar/sites/default/files/residuos.pdf>.

<sup>3</sup> Available online at: <https://www.undp.org/es/paraguay/press-releases/estudio-de-residuos-s%C3%B3lidos-urbanos-apunta-mejorar-su-tratamiento-y-disposici%C3%B3n-final>.

<sup>4</sup> Available online at: <https://www.opp.gub.uy/es/noticias/alcaldes-y-alcaldesas-asumieron-en-los-125-municipios-de-uruguay#:~:text=En%20Uruguay%20son%20125%20los,en%20el%20per%C3%ADodo%202020%20%2D%202025>.

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<sup>5</sup> United Nations Conference on Human Development and the Environment, 1972; Brundtland Report, 1987; Montreal Convention, 1987; Establishment of the World Commission on Environment and Development, 1983; National Environmental Policy Law, 1981.

<sup>6</sup> Available online at: [https://normas.mercosur.int/simfiles/normativas/34090\\_RES\\_022\\_1992\\_PT\\_RMedio\\_Ambien.doc](https://normas.mercosur.int/simfiles/normativas/34090_RES_022_1992_PT_RMedio_Ambien.doc).

REMA was tasked with analyzing the existing legislation in the Member States and proposing actions and initiatives in different areas aimed at protecting the environment, primarily through recommendations to the Common Market Group, thus ensuring efficient and coordinated environmental protection. Each of the Working Subgroups dealing with environmental issues was required to participate through appointed representatives in order to harmonize tasks and positions on the subject.

Noteworthy among REMA's actions is the elaboration of Basic Guidelines on Environmental Policy, approved in Mercosur Common Market Group Resolution No. 10/94, with the aim of ensuring equitable conditions of competitiveness in Mercosur, with the adoption of sustainable practices.

In 1994, the Common Market Group, the executive body of MERCOSUR, approved, through Resolution No. 10/94, the basic guidelines for the development of an environmental policy for MERCOSUR, which aimed to ensure the harmonization of environmental legislation among the Member States of the Treaty of Asunción, understanding that harmonization does not imply the establishment of a single legislation and that for the purposes of comparative analysis of legislation, both existing norms and their actual application were considered, and that in case of gaps in environmental legislation, the adoption of standards that adequately consider the environmental aspects involved and ensure equitable conditions of competitiveness in MERCOSUR would be promoted.

The measure also aimed to ensure equitable conditions of competitiveness among the Member States by including the environmental cost in the analysis of the total cost structure of any production process and ensuring the adoption of non-degrading environmental practices in methods that use natural resources, as well as ensuring the adoption of sustainable management in the use of renewable natural resources to guarantee their future use.

Furthermore, in 1995, with the definition of the new technical, organizational structure of MERCOSUR, the environmental issue began to be addressed within a Working Subgroup, SGT No. 6. SGT-6 was assigned, among other actions, the evaluation and study of the production process to ensure equitable conditions of environmental protection and competitiveness among the Member States, third countries, or regional groupings, and to ensure the mandatory adoption of environmental licensing/authorization practice for all activities potentially degrading to the environment in the Member States, including for the first time the issue of development and adoption of appropriate technologies, clean technologies, and recycling, and proper treatment of solid, liquid, and gaseous waste.

As a result of these different studies and actions, in June 2001, the "Framework Agreement on the Environment of Mercosur" was approved in Asunción, which was incorporated into Brazilian law through Decree No. 5208, of September 17, 2004, published in the Federal Official Gazette of September 20, 2004, p. 2.

The Framework Agreement on the Environment of Mercosur aims at sustainable development and environmental protection through the articulation between the economic, social, and environmental dimensions, contributing to a better quality of the environment and life of the populations. This norm substantially incorporates the search for efficient and effective environmental protection into the legal framework, as well as the sustainable use of the natural resources of the Member States, and explicitly states the principle of cooperation within Mercosur.

It also establishes a list of binding thematic axes, among which is the need for Quality of life and environmental planning, which encompasses the issue of urban and industrial waste, and environmental policy instruments, as well as in item 3.c. highlighting the need for education, information, and environmental communication.

In this context, it is essential to recognize the coordination evident between Consumer Law and the Right to an ecologically balanced environment, specifically in the issue of post-consumer waste. These are deeply intertwined matters, as can be seen even in the Presidential Declaration of Fundamental Consumer Rights of Mercosur, signed on December 15, 2000, which marks progress in this relationship but without coercive force.

Thus, while the issue of post-consumer waste or household solid waste is not addressed in an integrated manner in Mercosur, the Member Countries have approved specific national regulations to address this issue, which we will analyze in chronological order.

In the case of Argentina, the issue of urban or household waste is regulated by Law No. 25.916 of August 4, 2004<sup>7</sup>, called the Comprehensive Management of Household Waste: Minimum Environmental Protection Requirements<sup>8</sup>.

It is observed that this is a federal law that contains the minimum protection requirements, with provinces being responsible for complementation if necessary while respecting the principles established in the national norm<sup>9</sup>.

This law expresses the principles of adequacy and rationality in the comprehensive management of household waste, aiming to guarantee environmental protection and the quality of life of the population, the principle of valorization of domestic waste through the implementation of appropriate methods and processes, and the principle of reducing both the negative impacts that these waste materials can produce on the environment and the volume of post-consumer waste destined for final disposal.

In order to meet these principles, the law established the responsibility for the comprehensive management of household waste produced in each jurisdiction, which is the competence of the municipalities. They may establish the necessary complementary norms, instituting waste management systems adapted to the characteristics and particularities of their jurisdiction in order to prevent and minimize possible negative impacts on the environment and the quality of life of the population.

The second country to have a law regarding residential solid waste was the Republic of Paraguay, which, through Law No. 3.956/2009<sup>10</sup>, instituted the Comprehensive Management of Solid Waste. Its objective is the establishment and application of a legal regime for the responsible production and management of solid waste, whose normative content and practical usefulness should lead to its reduction to a minimum and avoid situations of risk to human health and the quality of the environment, establishing that the final disposal of solid waste generated in its jurisdiction is the responsibility of the municipality.

A set of principles was also established, such as the Principle of Co-responsibility of waste generators or causes of any degrading effect on the environment, current or future, who are responsible, together with the competent authorities, for the cost of preventive or corrective actions for restoration; the Principle of Congruence, which establishes that any departmental or municipal regulation that refers to the matter must conform to the mandates of national law, and otherwise, what is established in it will prevail over any other normative that opposes it; the Principle of Prevention, the Principle of Sustainability, and the Principle of Market Value, which defines that solid waste, products of the daily activities of a society, can be reused, being part of the raw material required by some productive systems. Therefore, they have a market value for purchase and sale.

<sup>7</sup> Partially promulgated on September 3, 2004.

<sup>8</sup> Available online at: <https://www.argentina.gob.ar/normativa/nacional/ley-25916-98327>

<sup>9</sup> See Article 41 of the Constitution of the Argentine Nation. It is the responsibility of the Nation to establish the norms that contain the minimum protection standards, and of the provinces to enact the necessary complementary norms, without altering local jurisdictions. In this sense, there is the Comprehensive Management of Urban Solid Waste Law of the Province of Buenos Aires (Law No. 13.592/06).

<sup>10</sup> Available online at: <https://www.bacn.gov.py/leyes-paraguayas/3208/ley-n-3956--gestion--integral-de-los-residuos-solidos-en-la-republica-del-paraguay>.

The law defines in Article 6 that the comprehensive management of solid waste includes both the processes and the agents involved in the stages of generation, collection, storage, transportation, transfer, treatment or processing and use, until final disposal, and any other operation involving them.

The norm establishes a central regulatory body with the objective of coordinating, complementing, and regulating the National Solid Waste Policy. It determines that municipalities must develop a Local Comprehensive Solid Waste Management Plan, which must be approved by the law enforcement authority, the Ministry of Environment (SEAM).

In the Federative Republic of Brazil, the specific norm is also of a national character and is called the National Solid Waste Policy, Law No. 12.305/2010.

Highlighted in this norm are principles, including prevention and precaution; the polluter-pays principle; the receiver-protection principle; a systemic view in solid waste management, considering environmental, social, cultural, economic, technological, and public health variables; sustainable development; eco-efficiency, ensuring competitive provision of goods and services that meet human needs and bring quality of life while reducing environmental impact and natural resource consumption to a level at least equivalent to the estimated carrying capacity of the planet; cooperation among different spheres of government, the business sector, and other segments of society; shared responsibility for the life cycle of products; recognition of reusable and recyclable solid waste as an economic asset and social value generator, creating jobs and promoting citizenship; respect for local and regional diversities; society's right to information and social control; and the principle of reasonableness and proportionality.

In Brazil, there are four structuring pillars that were integrated into the process of drafting the National Solid Waste Policy: one was environmental, another

economic<sup>11</sup>, the third was social, due to the situation of waste pickers in landfill areas, and the fourth, the democratic context that facilitated the participation of different sectors and interested actors.

However, it is observed that the application and regulation of this norm underwent a significant departure from its original format during the Bolsonaro government, resulting in a significant environmental setback.

In the Eastern Republic of Uruguay, there has been a specific norm for urban or household solid waste since 2019, called the National Integrated Waste Management Policy, established through Law No. 19.829 of September 18, 2019<sup>12</sup>. This law is in line with the principles established in Law No. 17.283 of November 28, 2000, which deals with the National Environmental Policy<sup>13</sup>.

Thus, the principles structuring waste management are prevention and anticipation as priority criteria over any other in environmental management, and when there is the danger of serious or irreversible damage, uncertainty cannot be alleged, whether for technical or scientific reasons, to avoid preventive action.

There is also the principle of systemic regulation, which must consider various variables, such as environmental, social, cultural, economic, and technological, to ensure the sustainability of actions; the principle of an integral model in waste management, considering the entire life cycle of products, including when applicable, those associated with product design and use, avoiding and minimize waste generation and facilitate recovery; the principle of diversity, ensuring the adequacy of the model to local and regional characteristics, guaranteeing system effectiveness and efficiency; the principle of shared responsibility,

<sup>11</sup> Item 21 of the Explanatory Memorandum of Bill 1991/2007 states: If managed properly, solid waste acquires commercial value and can be used in the form of new raw materials or inputs. Therefore, they can be incorporated back into production chains successively and systematically.

<sup>12</sup> República do Paraguai. Available online at: <https://www.impo.com.uy/bases/leyes/19829-2019>

<sup>13</sup> Available online at: <https://www.impo.com.uy/bases/leyes/17283-2000>.

aiming to involve the whole society in waste management, based on raising awareness among different sectors, as well as the implementation of sustainable production and consumption modalities; and finally, the recognition that waste can generate value and employment within a formal production process.

Furthermore, residents shall be responsible for the classification and segregation of household waste, as well as for its initial disposal, in accordance with applicable regulations. As seen, national norms are structured similarly, but some points may differ.

In this regard, the Waste Policy Law of the Oriental Republic of Uruguay stands out for presenting a more structured framework in environmental matters, with the highlight being the concept of Recycling, defined as the use of waste as input or raw material in a production process. However, it categorically excludes energy recovery from waste as a recycling action and establishes the need for management indicators, together with comprehensive information intended for system users, regarding both efficiency and costs.

The strongest common point lies in the principles, notably the principle of reduction, i.e., reducing waste generation and volume in final disposal in landfills, as well as the responsibility of municipalities in implementing integrated and rational management policies.

When taken together, the norms express shared or extended responsibility throughout the waste cycle, including provisions for waste management or its financing, and directly implicate consumer responsibility in the sense that they are the link that drives the system through the return of recyclable or reusable waste to the chain.

However, despite having this set of technically adequate norms, the Participating Countries only return around 5% of the total waste to the recycling system. Thus, given this, the issue of waste management is still in an early implementation phase, and one of the main challenges is to establish an efficient process of

normative integration regarding post-consumer waste, a challenge that is likely to continue to be a relevant agenda item, given the territorial and economic dimensions of the issue, particularly its effects on the quality of life in urban centers.

Thus, the problem involves economic, environmental, social, legal, and political dimensions, and according to the World Bank<sup>14</sup>, the main flow of waste, including post-consumer fossil fuel waste, continues to be landfills and dumpsites.

In this context, broader concepts can guide the construction of public policies in the sector, such as the concept of shared responsibility, which must be objectively defined for the development of a fair cycle of circular economy dynamics.

Therefore, it is relevant to establish specific goals for reducing waste production, particularly those produced based on fossil fuels, as these involve not only waste but also products that entail externalities, both global and local, in human health and pollution of air, water, and soil associated with the use of plastics.

However, such an issue is likely to continue facing resistance, primarily from manufacturers, importers, distributors, and traders, as the disposal of post-consumer household waste continues to be mainly funded by municipal public coffers and, to a limited extent, by collection fees paid by taxpayers.

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