

# Relevance of Responsible Consumption in Colombia and Its Alignment at a Regional and Local Level

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*Abstract:* – Responsible consumption is considered a primary objective for social and economic development and at the same time essential for sustainable development. The purpose of this study is to analyze the relevance of SDG-12, particularly in responsible consumption, in Colombia, Valle del Cauca, and Tuluá, to establish the alignment of the goals that are presented at the national, regional, and local levels, and that contributes to the country advances in the fulfillment of this objective. Initially, a theoretical analysis was carried out where the main approaches that responsible consumption has had over time were identified; subsequently, the analysis of the relevance of responsible consumption at different scales was carried out, for which the adaptation of an alignment methodology of the SDGs was carried out, using the Rapid Integrated Assessment tool – RIA; SPSS software was used for data analysis. The above, made it possible to establish the contribution made from the national to the local level, for the fulfillment of the goals of SDG-12. It was identified that in the country all the goals of SDG 12 were prioritized, although several have a low level of coverage; in Valle del Cauca and Tuluá, some goals are not prioritized.

*Key-Words:* - responsible consumption, sustainable development, environmental deterioration, environmental indicators, natural resources

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## 1 Introduction

Since the 1970s, with the Stockholm conference in 1972, it has been established that unsustainable models of production and consumption present a high risk to the stability of environmental goods and services. In addition, it was emphasized that, if the current form of consumption was maintained, renewable resources would be depleted. In this conference, the analysis of the forms of consumption was recommended to contribute to laying the foundations for a better use of natural resources in the world, considering the environmental impacts of their production and use, [1].

Later in Tbilisi, the significant influence of the media on consumer behavior was considered, and in turn how this behavior influences natural resources and the environment. Also, the responsibility of those who produce goods and advertise them, to the negative consequences on the environment was recognized, [2].

Subsequently, in 1992, the Earth Summit in Rio stated among its principles that, to contribute to people's quality of life of the population, in turn, move towards sustainable development, countries would have to change unsustainable forms of production and consumption. With Agenda 21, a global process focused on cleaner production began, with the permanent development of preventive strategies, to reduce environmental risks and increase eco-efficiency by integrating it into processes, products, and services. In this sense, it was sought to orient production and consumption towards responsible management of the environment, [3].

In 2002, in Johannesburg, at The United Nations World Summit for Sustainable Development, pointed out that the highest income nations were responsible for the largest percentage of consumption worldwide, in contrast to the lowest income countries that are only responsible for a smaller percentage. At this summit, global attention was drawn to the need to transform unsustainable

patterns of production and consumption. The implementation of a ten-year program to rapidly transform consumption and production patterns towards sustainable ones, known as 10YFP, [4], was also proposed. And in 2003, within the framework of the ten-year program, the Marrakech process began to help in the execution of policies and pilot projects at the international level on sustainable consumption and production, [5].

At Rio+20 in 2012, urgent action was called for an unsustainable pattern of production and consumption. The need to address environmental sustainability was also recalled, recognizing that significant transformations, in the way in which societies produce and consume, to achieve sustainable development, [6].

Finally, the United Nations, [7], approved the 2030 Agenda which proposes 17 Sustainable Development Goals, including goal 12 on responsible production and consumption, [8], which aims to guarantee that these are sustainable. In this sense, among other goals, the ordering and use of natural resources in a sustainable manner, the incorporation of sustainable actions, and the substantial decrease in waste production have been proposed.

50 years after the first summit, and despite the actions taken to address this situation, the pressures on ecosystems derived from consumption and production models continue, and environmental deterioration continues to increase. A situation to which Colombia is no stranger, where intense pressure is being generated on the natural component due to unsustainable production and consumption models, leading to the deterioration of environmental quality and harming the development of the country's productive sector, causing imbalances that must be addressed and corrected, [9]. In addition to this, in the country, the generation of knowledge and research in responsible production and consumption presents considerable limitations. The challenges posed by the SDGs for Colombia are accentuated by its low research capacity, [10].

There are several methods of measuring the progress of the SDGs, [11], [12], among which is the indicator measurement method, and the measurement of the distance towards the SDG goals. The indicator measurement method has a wide scope and is suitable for monitoring the SDGs at the national level, some indicators can be directly adopted from the global framework. However, this method presents some problems such as numerous indicators, limited description of objectives and

targets, duplicate or overlapping indicators, and poor clarity in groupings, [11].

In the case of the methodology for measuring the distance to the SDG targets, [13], it seeks to measure the distance to achieve the SDG targets in the country. Use a simple geometric growth model to assess the direction and pace of recent changes in SDG progress. Among the main difficulties of this methodology is the availability of data to establish the distances to travel to achieve the goals, there are gaps in the data, and it does not make a direct estimate of the value of the indicator for 2030. Considering the limitations of these methodologies, it is necessary to work on a process of relevance or localization of the SDGs, which can be applied at the subnational or regional level to find additional ways to measure the progress of the SDGs, to support the information system that the country has, due to the challenges represented by the monitoring of its goals and indicators, [14]. Another challenge that arises is the alignment at different territorial levels of the SDGs, for the clear identification of their progress, [15].

In this context, it is important to establish the relevance of responsible consumption to contribute to the efficient use of resources and mitigation of the environmental impact generated by human activities, [16]. To achieve this, research is required to enable the identification of actions in responsible consumption adopted at different scales, and in the country to attend to the call made by the National Planning Department (DNP), by establishing the need to work on the issue of consumption responsible to reduce the extraction of resources, food waste, increase recycling rates, between others, determining it as a pending task, [17].

This study presents the adaptation of the SDG follow-up methodology, rapid integrated assessment - RIA, at a regional and local level, to establish the contribution that is made from these planning levels to the country's progress in achieving the goals of the SDGs, since most of the methodologies reported in the literature for monitoring the SDGs are oriented only at the national level.

Also, this study shows the application of this monitoring methodology to a specific SDG, SDG-12, in a department and city of the country. Its application makes it possible to identify the alignment between the different levels, regarding the fulfillment of the SDG-12 goals. The contributions found report the general application of the methodologies to all the SDGs, with currently limited studies that specify SDG-12 at subnational levels.

This study serves as a reference for the analysis of the relevance of SDG 12 and the other SDGs, at the subnational level, in other countries. In addition, it provides information that favors the development of national, regional, and local strategies to advance SDG 12, based on the alignment between the different levels.

The main objective of this research is to analyze the relevance of SDG-12, specifically in Responsible Consumption, in Colombia, Valle del Cauca, and Tuluá.

## 2 Problem Formulation

### 2.1 Methodology

According to the problem posed, the following methodology was carried out:

#### 2.1.1 Determination of the Main Approaches Established in Responsible Consumption Worldwide

This stage was carried out to establish the guiding elements that responsible consumption has had since its beginning, entrenchment, and progress and that have contributed to the design of planning strategies in this topic in the country. At this stage, the approaches to responsible consumption at a global level are established in international conferences on the environment that have addressed responsible consumption and in institutions that advance, coordinate, support, and guide strategies on this issue worldwide.

For the analysis of the orientations or approaches on the subject of Sustainable Consumption, the search, review, evaluation, and systematization of information was carried out in the Conferences of Stockholm, Belgrade, Tbilisi, Rio, Johannesburg, Rio+20, Stockholm+50 among others. And in Institutions such as the UN, UNEP, and UNESCO.

The analysis identified the main aspects raised in responsible consumption in each of the conferences and the international institutional guidelines on the subject. This made it possible to establish a global panorama of responsible consumption.

#### 2.1.2 Analysis of the Relevance of Responsible Consumption at a National, Regional, and Local Level

For the development of this stage, the Rapid Integrated Assessment tool -RIA, [12], [18], was adopted, which provides an indicative vision of the level of alignment of the country with the goals of

the sustainable development objective (SDG) 12 on responsible consumption and production. Initially, the goals of this SDG were mapped in accordance with the country's priorities established for this topic in the National Development Plan 2018-2022, [19], where the main thematic areas in which planning is supported at the national level were identified (for example, economic growth, protection and social challenges, health, education, good governance, renewable natural resources, environment conservation, among others), and subsequently, the goals of SDG-12 were related to these areas. This information made it possible to establish how SGD-12 is reflected in the national goals and targets. Also, to establish the coherence and relevance that is presented at the country level in responsible consumption, concerning the approaches established at the global level obtained in the results of the first stage.

In the same way, the relevance of responsible consumption was analyzed at the regional level in Valle del Cauca, for which the goals of SDG 12 were mapped in accordance with the department's priorities, established for this SDG in the Development Plan for Valle del Cauca (2020-2023), [20], and at the local level in the city of Tuluá, the mapping of the goals of SDG 12 was carried out in accordance with the priorities of the city, established for this SDG in the Development Plan for the municipality of Tuluá (2020-2023), [21]. For each level, the goals were related to the thematic planning areas identified.

These mappings were contrasted with the results of the analysis of the relevance of responsible consumption for the country, to establish the alignment between the different levels. This was done to find out the priorities at the regional and local levels in responsible consumption in relation to the priorities set at the national level, [22]. In the information processing, the SPSS software was used.

## 3 Problem Solution

### 3.1 Results and Discussion

#### 3.1.1 Main Approaches to Responsible Consumption Worldwide

The guidelines on responsible consumption established by international environmental conferences such as the Stockholm Earth Summit, the Tbilisi Conference, the Rio Summit, the Johannesburg Summit, the Marrakech Process, the Rio+20 Conference, and Stockholm+50 have

oriented the guidelines on the subject. In Stockholm, [1], the importance of considering the environmental impacts of the production and use of energy resources compared to consumption was highlighted, to contribute to establishing the principles for better use. Later in Tbilisi, [2], the responsibility of consumers was considered, with their behavior regarding the use of resources, and their repercussions on the environment, recognizing that they are influenced by the media.

At the Rio conference, responsible consumption was explicitly addressed for the first time; there it was established that, worldwide, mainly in developed countries, unsustainable production and consumption are the main cause of environmental damage, [23], a condition that threatens the continuity of several environmental goods and services that allow the development of productive activities and the improvement of the quality of life of the population. Subsequently, in Johannesburg, [4], necessary guidelines were proposed to transform unsustainable production and consumption models, establishing that to achieve sustainable development on a global scale, it is necessary to make changes in the way societies produce and consume. Similarly, a framework agreement was generated with actions to be carried out in the next 10 years in responsible production and consumption. This sought to strengthen international cooperation and increase access to information, required to favor the implementation of programs at the national and regional levels that would promote responsible production and consumption.

Following the Marrakech process, [24], the execution of policies and projects on a pilot scale, on sustainable consumption and production was sought, supporting initiatives to promote changes in the framework of global processes and contributing to the design of 10-year programs, for this, the process considered the identification of needs and priorities in sustainable consumption and production.

Later, at Rio+20, [6], the importance of promoting sustainable consumption and production patterns was reaffirmed as one of the objectives and essential requirements to achieve sustainable development. Similarly, it was insisted that to achieve sustainable development worldwide, it is essential to carry out a significant transformation in how society consumes and produces. Finally, in Stockholm+50, [25], the need to speed up compliance with the goals of SDG 12 through the efficient use of resources and the circular economy was repeatedly emphasized; also promoting more

responsible lifestyles and consumption through, among other things, the provision of consumer information and better labeling. It was stressed that responsible consumption and production should be at the center of environmental solutions.

The United Nations (UN) is among the institutions that at the international level address responsible consumption in different areas, contributing to its dissemination and the development of programs that handle the issue, such as the Program for the Environment (UNEP), for Education (UNESCO), and Development (UNDP). UNESCO and UNEP, [26], have recognized that today's young people represent a considerable group within the consumer society, and the behaviors that they develop now will have a decisive role in future consumption habits. As consumers, their decisions increasingly influence markets and lifestyles. These consumers recognize that many future decisions will be in their hands, and some of them already show responsible and positive attitudes towards caring for the environment, [27]. On the other hand, it emphasizes the relevance of education to shape behaviors, attitudes, and values, and at the same time promotes the development of skills, abilities, and commitment required to contribute to a sustainable future.

In relation to responsible consumption, education is sought that contributes to the satisfaction of the fundamental needs of the global population, the reduction of excesses, and the minimization of environmental damage. Through education, the population can be provided with mechanisms that promote responsible consumption, which implies a commitment from the entire community. Education responsible consumption is required to contribute to change in society, [28].

The UNEP, [29], considers that responsible consumption refers to the use of goods and services to respond to basic needs and contribute to improving the quality of life; seeks to simultaneously reduce the use of natural heritage and toxic components, as well as exposure to waste and polluting materials. Responsible consumption, from an integrated approach with sustainable production, contributes to achieving the goals of development plans, minimizing future social, economic, and environmental costs, in addition to reducing poverty and strengthening economic competitiveness. Also, in this program it is established that measures must be taken to change the current patterns of unsustainable production and consumption, motivating the nations to work together in the development and admission of an integrated policy of responsible production and

consumption and the strengthening of the dialogue, cooperation and participation of all interested parties, and thus achieve progress.

For the United Nations, [30], the modes of consumption and responsible production include issues from different sectors that acquire a comprehensive perspective and consider environmental, social, and economic aspects of sustainable development, in a balanced way. Likewise, it considers that production and consumption activities are fundamental in the world economy, but current patterns are rapidly ending natural wealth, deteriorating ecosystem services, and exhausting the possibilities of nations to respond to their needs sustainably. The transformation in production and consumption trends is necessary so that the ecological footprint decreases and leads to economic growth within the framework of sustainable development. In the same way, companies and the consumer society must heed the call to reduce waste and increase recycling. Additionally, to achieve the proposals raised by 2030, it is required to accompany developing countries so that they can move forward with the incorporation of sustainable production and consumption practices, [16].

### **3.2 Relevance of Responsible Consumption at the National, Regional and Local Level**

The analysis of planning documents in the country, such as the National Development Plan 2018-2022, [14], allowed to establish the goals related to responsible consumption that Colombia planned for this period of time, finding, among them: promoting responsible and sustainable tourism, create environments healthy food, increase the hectares of sustainable production systems, implement sustainable production alternatives for the conservation of strategic environmental areas, implement actions for the reconversion and development of sustainable production processes, advance in the system of socially and environmentally sustainable purchases, carry out sustainable management of the water sources of the Pacific region, potentiate the entrepreneurship of green businesses and the sustainable use of marine ecosystems, promote the conservation and sustainable use of natural capital.

The contrast of this information with the goals set for SDG-12 allowed its classification according to the main sectors considered in planning such as economic growth, protection and social challenges, health, education, development and management of resources, employment, renewable natural resources, good governance, tourism and sustainable

development, trade, industry and mining, hydroelectric power, renewable energy, preservation and promotion of culture, ICT and media, competitiveness, settlements and housing, construction, and conservation of the atmosphere. Among the goals prioritized in the country by multiple sectors are goal 12.5 Prevention, reduction, recycling, and reuse of waste; target 12.6 Adoption of sustainable practices in companies; and target 12.7 Sustainable public procurement, coinciding with what was reported by the DNP in the progress reports of the Colombia SDGs, [31], [32]. The Country has worked on this last goal since the National Policy on Sustainable Production and Consumption was implemented in 2010, recognizing the importance of considering sustainable criteria for the acquisition of products and services in the public sector, promoting sustainable public purchases, when considering the great purchasing power that the State has, this being a key scenario to accelerate the achievement of SDG 12, [33]. In this sense, Colombia proposed a conceptual and methodological guide for carrying out sustainable public procurement that has been tested by different countries, [34].

The sectors at the national level that prioritized the most SDG-12 goals were Commerce, Industry, and Mining; Economic growth; and environmental conservation. Among the goals prioritized by these sectors are the common 12.1 Application of the Ten-Year Framework programs on sustainable production and consumption modalities; 12.5 Prevention, reduction, recycling, and reuse of waste; target 12.6 Adoption of sustainable practices in companies; target 12.7 Sustainable public procurement; and 12. b Sustainable tourism.

In the mapping carried out, no goals were presented without prioritizing, however, several of them require greater coverage, such as goal 12.4 Ecological management of chemical products and waste, and goal 12. b Sustainable tourism. In the same way, the sustainable Tourism sectors; and Settlements and housing were the goals that prioritized the least.

In the same way, as at the national level, the analysis of the Development Plan for Valle del Cauca (2020-2023), [20], and the Development Plan for the municipality of Tuluá (2020-2023), [21], allowed the mapping of responsible consumption goals at the regional and local levels.

At the departmental level, its development plan highlights the promotion of clean production and responsible consumption practices, support and incentives for circular economy, solid waste management, sustainable tourism, food security,

environmental management, and sustainable use of biodiversity, among others. At the municipal level, priorities are presented such as the conservation of natural resources, comprehensive management of solid waste, and sustainable agricultural development, amongst others.

Between the goals prioritized in the department by multiple sectors are goals 12.3 Reduction of food waste; 12.5 Prevention, reduction, recycling, and reuse of waste; and 12. b Achieve sustainable tourism.

The sectors that prioritized the most SDG-12 goals were Development and resource management, and Conservation of the environment. Amongst the goals prioritized by these sectors are 12.2 Sustainable management and efficient use of natural resources; 12.3 Reduction of food waste; 12.4 Ecological management of chemical products; 12.5 Prevention, reduction, recycling, and reuse of waste; and 12.8 Ensure education for sustainable development.

The non-prioritized goals were 12.6 Adoption of sustainable practices in companies; 12. Strengthening of science and technology for sustainability; and 12. c Regulation of fossil fuel subsidies.

At the local level, amongst the goals prioritized in the municipality by multiple sectors are goals 12.1 Application of the Ten-Year Framework programs on sustainable production and consumption modalities; 12.7 Sustainable public procurement; and 12.8 Ensure education for sustainable development.

The sectors that prioritized the most SDG-12 goals were Development and resource management, Protection, and social challenges. Between the goals prioritized by these sectors are 12.2 Sustainable management and efficient use of natural resources; 12.5 Prevention, reduction, recycling, and reuse of waste; 12.6. Adoption of sustainable practices in companies; 12.7 Sustainable public procurement and 12.8 Ensure education for sustainable development.

The non-prioritized goals were 12.3 Food waste reduction; 12. Strengthening of science and technology for sustainability; 12. b Achieve sustainable tourism and 12. c Regulation of fossil fuel subsidies.

At the local level, institutions such as the Central University of Valle del Cauca-UCEVA, [35], the Regional Autonomous Corporation of Valle del Cauca - CVC, [36] center-north, and the Secretary of Agricultural Assistance and the Environment- SEDAMA, [37], have worked on the issue of responsible consumption, assuming it as a

transversal theme that permeates all environmental components, such as water resources, soil, air, since the excess demand for natural resources affects the quality of life; and have acted on issues related to the goals on waste management, including hazardous waste, in terms of generation, use, recycling, final disposal, and circular economy. These activities have been carried out in a participatory manner, involved the community in the development of these, and routes have been established for the implementation of actions in environmental education around the promotion of a culture of responsible consumption.

Together with different actors who are responsible for the issue of solid waste, such as the mayor's office, the company that provides the cleaning service, and community organizations, they permanently carry out activities to raise awareness and educate people on the subject; training sessions are also held, as well as practical recycling workshops, post-consumer waste collection sessions, and the construction of agroecological gardens, among others, these sustainable practices impact compliance with SDG 12, [38].

The actions have been oriented with an environmental educational approach and with important work on the issue of solid waste management and food safety; work that is carried out jointly between public and private entities, and that includes the community to promote a sustainable lifestyle, considering the importance of the local context and sociocultural aspects in the development of activities and practices in responsible consumption, [39]. This is in line with the recommendations to achieve the goals of SDG 12, such as cooperation between actors, and consumer awareness through education on sustainable lifestyles, [40], this environmental knowledge facilitates compliance with the goals established in SGD 12, [41].

Following the above and in contrast to what is established in the relevance of responsible consumption in the country, it is observed that goals such as 12.5 (Prevention, reduction, recycling, and reuse of waste) is the one that has been worked on the most and has oriented towards the formation of responsible consumption habits in the population through environmental education, this goal being prioritized at the national level and also addressed at the departmental and municipal levels. That is, the activities carried out on these scales contribute to the fulfillment of the goal in the country. In this sense, the importance of joint work is highlighted to understand the challenges and how it is collectively contributed through the different levels, [42], and

across sectors to do more, efficiently and effectively, to accelerate progress towards the achievement of the SDGs by 2030, [22], including SDG-12.

Figure 1 and Figure 2 illustrate the summary of the Rapid Integrated Assessment- RIA is carried out at the national, regional, and local levels. In the mapping it was identified that in the country all the SDG-12 targets analyzed were prioritized, however, several of them present a low level of coverage. At the departmental and municipal levels, some goals of SDG-12 are not prioritized. Similarly, the mapping made it possible to establish that in Colombia all the sectors analyzed have prioritized goals of SDG-12, finding several sectors with a low level of prioritization such as Settlements and Housing. And correspondingly, for the department of Valle del Cauca, and the city of Tuluá, in this sector, SDG-12 targets were not prioritized.

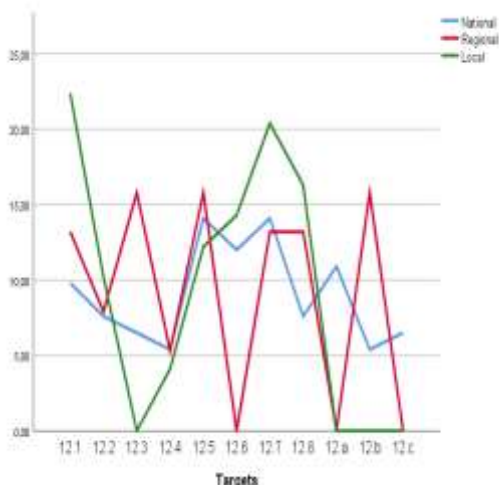


Fig. 1: Rapid Integrated assessment of SDG-12 targets prioritized at the national, regional, and local levels.

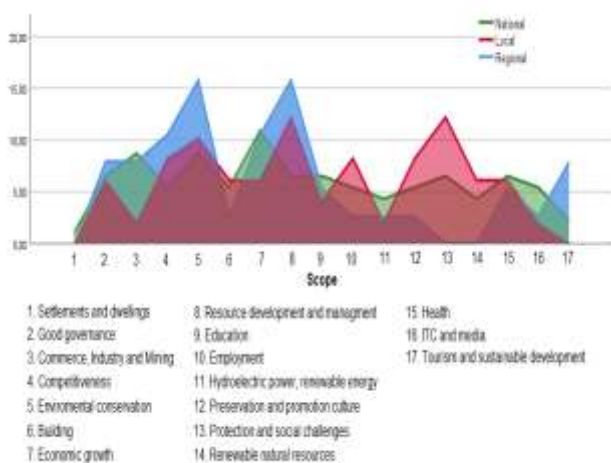


Fig. 2: Rapid Integrated assessment of SDG-12 targets prioritized by sectors at the national, regional, and local levels.

In contrast to the approaches established at the global level on responsible consumption, coherence, and relevance to the prioritized goals of SDG-12 at the national, regional, and local levels are observed. However, as evidenced in the mapping, some goals were not prioritized at the regional and municipal levels, which is why a higher level of alignment is required in planning at all levels with the goals established in SDG-12, which will allow a better performance of the country compared to its contributions in the achievement of these goals at a global level. Likewise, it is important to bear in mind that the scope of the goals in responsible production and consumption at the different levels also depends on the synergistic interactions with other SDGs, [43], that contribute to their progress, [44], and that they need to be analyzed.

#### 4 Conclusion

An important contribution to studying the progress in responsible consumption in the country was the analysis of world conferences on the environment, and of the institutions that address responsible consumption, which allowed establishing the main approaches to responsible consumption worldwide, among which it highlights its transversally and the importance it has in meeting the development goals of the countries, in reducing environmental, economic and social costs, in reducing poverty and in improving economic competitiveness.

In establishing the relevance of responsible consumption for the country, it was possible to show that Colombia has considered SDG-12 in its development plan, finding that three goals of this SDG were prioritized to a greater extent, 12.5; 12.6 and 12.7, which refer to the prevention, reduction, recycling, and reuse of waste; the adoption of sustainable practices in companies; and sustainable public procurement, respectively. It was also possible to establish that there is a lack of greater alignment with the ecological management of chemical products and waste (goal 12.4), and sustainable tourism (goal 12. b). The sectors that prioritized a greater number of SDG-12 targets were environmental conservation, and resource development and management.

From the regional and local level, it has contributed to goal 12.5 on prevention, reduction, recycling, and reuse of waste, which was prioritized at the national level. This has been one of the goals



in which more studies and activities have been carried out in Valle del Cauca and Tuluá, which represents a significant contribution to its fulfillment in the country. Similarly, the identification of the actions carried out in responsible consumption allowed for establishing that a better alignment is required between the different levels in the planning of the country, the department and the municipality with respect to the goals of SDG-12.

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**Conflict of Interest**

The authors have no conflicts of interest to declare.

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