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Colombian public politics strategies. Process of transition to a circular economy

Estrategias de política pública colombiana.
Proceso de transición a una economía circular

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Abstract

The objective of this research is to identify Colombian public policy strategies in the process of transition to a circular economy. A descriptive and documentary theoretical-bibliographical research work was carried out, using specialized databases as criteria for searching and selecting information, using the keywords: Sustainable development, Circular economy, Recycling, Strategies and Public Policies in Colombia; In addition, databases were consulted on websites of the main public entities in the country in charge of formulating and implementing public policies. It was found that there is a national policy for the comprehensive management of solid waste, implemented separately through a linear economy model, through recycling, and public policy strategies point towards sustainability represented in four strategic axes related to the circular economy. It concludes on the importance of the articulation of public policies with the implementation of these strategic axes in order to enhance social, economic and environmental effects.

Keywords: Strategies; Public policies; Circular economy; Sustainable development; Colombia.

Resumen

El objetivo de esta investigación es identificar las estrategias de política pública colombiana en el proceso de transición a una economía circular. Se realizó un trabajo de investigación teórico- bibliográfica, de tipo descriptiva y documental, utilizando bases de datos especializadas como criterio de búsqueda y selección de información, utilizando las palabras clave: Desarrollo sostenible, Economía circular, Reciclaje, Estrategias y Políticas públicas en Colombia; además se consultó bases de datos en sitios web, de los principales entes públicos del país encargados de la formulación e implementación de políticas públicas. Se encontró que existe una política nacional para la gestión integral de residuos sólidos, implementada separadamente mediante un modelo de economía lineal, a través de reciclaje, y las estrategias de política pública apuntan hacia la sostenibilidad representada en cuatro ejes estratégicos relacionados con la economía circular. Se concluye sobre la importancia de la articulación de políticas públicas

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con la implementación de estos ejes estratégicos para potenciar efectos de carácter social, económico y ambiental.

Palabras Clave: Estrategias; Políticas públicas; Economía circular; Desarrollo sostenible; Colombia.

1. Introduction

The preparation of this theoretical-bibliographical research work took into consideration, as its main guideline, the research question: What public policy strategies have been promoted in Colombia in the process of transition to a circular economy?

To answer the question, a theoretical-bibliographical review, analysis and synthesis work was carried out, identifying relevant studies on the subject, prioritizing those related to the objective or any of the variables involved in the objective of the research, which is: To identify the strategies that guide Colombian public policy regarding the transition process towards a circular economy.

With this documentary research, the community of researchers, students and the community in general, interested in the subject, is supported by providing updated and accurate information on the strategies implemented by the Colombian government through public policies for the process of transition to a circular economy. Relevant information in light of the understanding, by the various social actors and levels of government, regarding the path that guides the national government's policy, regarding the process of transition from a linear economy model to a circular economy and the consequent creation of awareness about the environment.

The work is presented through the structure of the expository text as follows: an introduction that poses the research question, indicating the objective pursued with the review and the audience to whom it is addressed; the methodology adopted to carry out the bibliographical search, the selection criteria, information retrieval, documentary sources and their validity; development and discussion where the critical argumentation of the results obtained through the review and analysis of the documents is carried out;

ending with the conclusions, which are based on an abstraction of the information obtained with the results of the documentary analysis carried out, and finally the bibliographical references.

2. Methodology

A theoretical-bibliographical work was carried out, attending to a descriptive and documentary research; the descriptive review "provides the reader with an update on useful concepts in constantly evolving areas. This type of review is very useful in teaching, and will also interest many people in related fields " (Vera, 2009, p.4), in order to stay up-to-date on general topics of interest. Among the main texts and articles analyzed are the works of Sandra Cointreau-Levine (2000); Guzmán and Macías (2012), Arroyo (2018); González, Mejía, and Méndez (2018); Martínez and Porcelli (2018); Espaliat, (2018); Jiménez, (2020); among others, which support the review and theoretical analysis that was carried out.

Likewise, it is documentary insofar as a systematic review was carried out that identified, analyzed and synthesized consulted documents in order to answer the specific question: What public policy strategies have been promoted in Colombia in the process of transition to a circular economy?

The analysis of the documents was carried out considering mainly two aspects: an analysis of form, that is, revision of the type of document, authors, publisher, among other aspects related to the criteria of search and selection of information and, on the other hand, an analysis of its content, that is to say, referring to the subject matter dealt with in them.

The search and information selection criteria used was the consultation of documents generated from the web pages of the main public government agencies in Colombia, responsible for the formulation and implementation of public policies, related to the topic of the research question, such as: Public Ministry, Superintendency of Home Public Services (Utilities), Ministry of Environment and Sustainable Development, National Planning Department, National

Council of Economic and Social Policies-Conpes-, Ministry of National Education, Ministry of Science; as well as the systematic review of the laws, decrees and norms that regulate the comprehensive management of solid waste in Colombia and the search for scientific articles in specialized databases, such as *web of science*, with a document observation window comprised from the year 2000 to the year 2020, using the key words: Sustainable Development, Circular Economy, Recycling, Strategies and Public Policies in Colombia, which are directly related to the subject.

A content analysis of the abstracts of the documents found in the observation window was carried out, in order to select those closest to the objective of this work for their review, analysis and synthesis transcribed in tables. This review also referred us to documents of older data, among which is the work of Cointreau-Levine (1994) and the Report presented to the Assembly of the United Nations Organization -UN- (1987), by Gro Harlem Brundtland, at that time President of the United Nations World Environmental Commission in which the term sustainable development is mentioned, which led to the search for UN reports on sustainable development and the environment.

3. Theoretical development

The following section presents the theoretical development achieved by reviewing the literature, analysis of the articles, and consulted documents, considering the relationship between the state and public policies by defining strategies in order to solve social problems, such as problems caused by solid waste disposal.

3.1. State, government agenda and public policies for the solution of social problems

In order to address a social problem, it is necessary to understand the foundations inherent to it, an issue that implies reviewing the theoretical discourses developed (carried out), thus, coinciding with Rivera and Malaver (2011) "managerial training must contemplate the development of analytical capacity from theoretical frameworks that facilitate the understanding of the situations

that organizations must face in the dynamics of competing for resources and markets" (p. 5).

In this sense, "When it comes to tackling any problem in Colombian society, there are two reiterative complaints against the action of the State: the absence of public policies and the ineffectiveness of existing laws. However, when it is necessary to make a decision, it is common to issue all kinds of laws, decrees and administrative acts, as if the proper functioning of the state depended on it and therefore the overcoming of the situation that they are trying to face " (Mora Padilla and Pardo, 2013, p. 13), the promulgation of laws and norms, which although they are necessary for the solving of social problems, is not the only way that governments and states have in order to achieve objectives of such magnitude, it is necessary to imbricate values in society for their achievement.

Regarding the problem of solid waste and its impact on the environment, the Ley 1259 of december 2008 emanated from the Congress of the Republic of Colombia, through which the environmental subpoena (penalty ticket) is established throughout the national territory for violators of the garbage collection, cleaning and debris collection regulations, and in its article 2 a brief of terms, it defines solid waste such as: "all kinds of material, organic and inorganic, and compact in nature, which has been discarded after consuming its vital part" (Congreso de Colombia, 2008).

CONPES expands the definition of the term solid waste, given by Law 1259, as follows:

"Any object, material, substance or solid element resulting from the consumption or use of a good in domestic, industrial, commercial, institutional, service activities, that the generator abandons, rejects or delivers and that is susceptible of use or transformation into a new good, with economic or final disposal value " (CONPES, 2008, p. 8).

The previous definition, given by CONPES, includes an element of substantial importance, such as that of "susceptible for use ", which suggests a strategy to solve the problem generated by waste; given that, "the waste generated by human groups always existed, but its presence as an environmental

problem is a recent phenomenon” (Guzmán and Macías, 2012, p.239). Obviously, recently considered as a problem, since its incorporation into government public agendas through the pressure exerted by environmental groups worldwide and due to the serious consequences that they actually generate for the environment and for future generations, given that it has always existed as a problem.

Environmental problems caused by solid waste is a situation that has occupied the government agenda regarding the formulation of public policies that can solve them, as far as possible through their use, that is why the recycle option defined in Article 2 of Law 1259, as: “process by means of which from a solid waste we recover its original form and utility, or others” (Congreso de Colombia, 2008), it is an alternative that suggests government public policy strategies.

The strategies according to Rivera and Malaver (2011), are based on the analysis of the present situation, the definition of what the resources are, what they should be and which ones for the creation of the changes considered necessary in order to achieve the desired future. In this sense, the strategies require the support and contribution of other disciplines and sciences for their development: economics, sociology, psychology, political science, the contribution of biology, physics, chemistry, among others.

That said, the review of government strategies considers the approach to “the complexity of the public agenda, and above all the process to put a social problem on the agenda, which involves observing the different perspectives with which the public policy is analyzed. (Vargas, Leal and Hernández, 2018, p.107); among these perspectives: the purely state approach, the process approach and the systemic approach.

It is then, from the perspective with which the government visualizes the process to put on the agenda a social problem and its public policy, the way to understand “the role of the actors, their discourses and the institutions in the government structures, the results of policies and the well-being of society ”(Torres and Santander, 2013, p.35), for which it is essential to understand, as

Torres and Santander (2013) point out, these perspectives in order to adequately evaluate the effects of public policies about citizens and their rights.

In this sense, following Dunn (2017), with the systemic approach or approach that understands policies as a system, and that results from the interrelation of three components: public policies, those interested in them and the environment or context of those policies, which would generate relevant knowledge for the improvement of state actions.

The interaction of the various social and political actors with the government, in order to guide the actions to be taken, in an attempt to solve a social problem, is always necessary in achieving consensus that leads to the inclusion of the problem felt in the government agenda.

This is how, from a systemic agenda or set of problems that concern society, then the government or institutional agenda results, which will include public problems over which the public authority has powers, wants and can decide, for which, such a choice will be due to markedly political and financial factors (Vargas *et al.*, 2018), that will eventually consolidate the formulation of public policies. Public policies understood as: “set of actions or omissions that manifest a certain mode of state intervention in relation to an issue that attracts the attention of civil society” (Oszlak and O’Donnell, 1987, pp. 112-113).

In this sense, state intervention in order to solve social problems through the implementation of public policies, is inserted through predetermined strategies that may or may not involve the private sector, therefore, “to decide whether the participation of the private sector is convenient, many factors need to be analyzed, such as cost recovery, efficiency, accountability to the public, management, finances, economies of scale, legislation, institutions and costs” (Cointreau-Levine, 1994, p. 10).

However, the discussion should focus on the quality of management and the optimization of resources in order to meet the needs and demands of the population. “At present, it is

recognized and accepted that the discussion that pits the state against the market does not make sense in itself; on the contrary, it is necessary to introduce the effectiveness of the state as the main theme or topic (Torres and Santander, 2013, p. 27), in order to bring together the three pillars of sustainable development: economic development through the economic progress of nations, social development and environmental protection.

With the report presented to the UN Assembly, prefaced by Gro Harlem Brundtland, the term sustainable was used in order to indicate an aspect of the development of nations, said report expresses that there was the need of: “a new era of economic growth, a growth that should be powerful while being socially and environmentally sustainable “ (ONU, 1987, p. 13), with which the development of nations began to be considered from that purpose of sustainability.

Thus, in the report of the preparatory committee for the United Nations Conference for Sustainable Development, it is specified that: in practical terms, the consensus on sustainable development requires international cooperation and national leadership in order to achieve a convergence between the three pillars of sustainable development, namely economic development, social development and environmental protection, in particular by accelerating the convergence of living standards around the world and rapidly decreasing the convergence of environmental effects (ONU, 2010, 2012). However, discussions have arisen regarding the differences between the terms sustainable development and sustainable development.

Considering the above, Zarta (2018) understands that: “sustainable (sustainable) development is a harmonious process between the different disciplines of knowledge, especially in the economic, social, environmental, cultural and / or a corresponding values system” (2018, p. 9); the author also expresses that such difference is only justified from the perspective or

ideological tendency or particular interests, also considering that the term sustainable is the most used today.

Regarding the economic aspect, the journey through the history of this thought has focused on the “Theory of economic growth, from which the concepts of sustainable (sustainable) development and sustainable human development derive” (Aguado, Echabarría, and Barrutia, 2009, p. 105). Development as an analytical category is presented by the authors, Aguado, Echabarría, and Barrutia (2009), from the different postulates of the economic schools, and reflected in Table 1.

Los mencionados postulados, han evolucionado con base en concepciones filosóficas diferentes, tales como: el racionalismo, el fatalismo, el relativismo y el pragmatismo¹; estas concepciones filosóficas no son objeto de estudio en este

The aforementioned postulates have evolved based on different philosophical conceptions (concepts), such as: rationalism, fatalism, relativism and pragmatism¹²; these philosophical conceptions are not the object of study in this work, but they deserve to be reviewed, in order to specify the evolution of the aforementioned economic schools, around the concept of development and the impetus given to the paradigm shift from a conventional economy to a circular economy. By way of synthesis, Table 2 shows aspects that differentiate the criterion of conventional economy from that of circular economy.

Within the framework of sustainable development, physiocrats, ecologists and environmentalists envision the material restrictions that the planet has to be exploited indeterminately and they identified economic growth as a circular system flow of materials.

In this way, the term sustainability evolves from the concept of green economy, which represents the efficient use of resources, development of clean technologies, conservation of bioproductive ecosystems in the search for the reduction of environmental

¹ Rationalism: philosophical doctrine the basis of which is the omnipotence and independence of human reason; Fatalism: belief that everything happens by inescapable predetermination or destiny; Relativism: doctrine according to which reality lacks a permanent substratum and consists in the relation of phenomena; Pragmatism: philosophical movement started in the United States by CS Peirce and W. James at the end of the 19th century, which seeks the practical consequences of thought and puts the criterion of truth in its efficacy and value for life (Rivera and Malaver, 2011, p. 10).

Table 1. Main contributions of the different economic schools around the concept of development

School	Postulates
Mercantilism	The increase in national wealth is achieved through trade surpluses.
Physiocracy	The origin of wealth is in agriculture.
Classical Economics	Wealth rests on the accumulation of factors of production that will be limited. Existence of the stationary state. No interventionism.
Neoclassical Economics	Without barriers that impede factor mobility, a balance of income and production will be achieved and, as a consequence, full employment.
Keynesian Economics	By increasing the components of aggregate demand, income can be increased more than proportionally. The economy evolves cyclically based mainly on fluctuations in the investment rate.
Modernization Theory	They are betting on the export of the development model of Western countries in order to solve the vicious circles that exist in underdeveloped countries that prevent “take-off” from taking place.
Structuralist Theory	Underdevelopment is due to the current international division of labor model.
Neo-Marxist Theory	Underdevelopment is a consequence of the historical process of capitalist development.
Neoliberal theory	Consideration of the market as the most efficient resource allocation mechanism. Bet on the international liberalization of trade.
Alternative Development Theories	Multidisciplinary nature of development. They bet on the involvement of institutions in the economy.
Ecological Economy	It emphasizes the impossibility of maintaining exponential growth in the face of the impossibility of perfect substitution of natural resources.
Environmental Economy	They consider the possibility of substituting natural resources for technology and propose techniques in order to account for these natural resources and introduce them into economic models.

Source: Aguado *et al.*, 2009).

Table 2. Circular economy and conventional economy: differentiating aspects

Variable	Circular economy	Conventional economy
Production model	Comprehensive (Development of eco-friendly products and services) Use of the analytical category: Reduce, Reuse, Recycle (3R)	Linear (Manufacture-Consume-Eliminate) Use of the analytical category: Waste
Social model	Balance in the relationship of the human being and the environment	Imbalance in the relationship between human beings and their environment Poor habits of social - business behavior towards the environment
Philosophy	Sustainability / sostenability From cradle to cradle	Satisfaction of the economic, social, cultural and environmental needs of the present generation (conventional sustainability) From the cradle to the grave
Resource management	Infinite cycle of natural resources	Depletion of natural resources
Economic management	Energy efficiency	Business financial efficiency
Technologies	Use of clean technologies	Use of polluting technology

Source: Prepared by the author with data from (Arroyo, 2018; Martínez & Porcelli, 2018; Jiménez, 2020; Espaliat, 2018).

pollution, although allowing the infinite and expansionary growth, and the internalization of costs promoting the principle of “ he/she

who pollutes has to pay”, until reaching the definition of the term Circular Economy, which consists of a cyclical flow that involves

extracting, transforming, distributing, using and recovering materials and the energy of products and services (Zarta, 2018; Prieto, Jaca, and Ormazabal, 2017). Therefore, the main objective of the Circular Economy model is to reduce the pressure on the environment in different ways, to increase social welfare and generate greater efficiency in industrial production (Departamento Nacional de Planeación, 2017).

The Circular Economy “responds to the change in scientific, business and political thinking, which has been faced with the need to develop strategies that enables environmental sustainability to be made possible, without neglecting the social and economic challenges of today’s world” (Prieto, *et al.*, 2017, p. 90).

For this paradigm to really work, it is necessary to search for parameters and strategies through eco-design, so that companies may develop eco-innovative and environmentally friendly or eco-environmental products, that is, guided by the principles of nature. As an example of these design strategies, we can mention, the strategy “From cradle to cradle”, a term attributed to the economist Walter Stahel, which starts from the elimination of the waste concept and the use of renewable energies; the Biomimicry strategy, “which is based on three fundamental principles: nature as a model, as a measure and as a mentor” (Martínez and Porcelli, 2018, p. 303), among other forms of design related to the circular economy.

Therefore, the approval of the 2030 Agenda for Sustainable Development by the member countries of the United Nations in 2015, implies consolidating a new way of relating the state, the private sector, and citizens where the private sector becomes an ally of governments and citizens in the implementation of the agenda and the achievement of the 17 objectives for sustainable development, promoting the diffusion (dissemination) of innovations and new technologies, creating and expanding more inclusive and economically, socially and environmentally sustainable business models, through innovative public-private partnerships (Naser, Ramírez, and Rosales, 2017; United Nations, 2018).

It is from data analytics and artificial intelligence, the democratization of access to government data and transparency in the reports of the different economic entities, where a key would be found for new ways of relating the state, the private sector and the citizenry, in addition to promoting compliance with government strategies in achieving the transition objectives towards a circular economy model.

4. Results and discussion

The main findings obtained by reviewing the literature and analyzing the articles, documents and legal provisions consulted are addressed in the following section, identifying the predetermined strategies embodied in the public policy (policies) of the Colombian government in the process of transition to a circular economy.

4.1. Colombian government strategies for the use of solid waste and transition to a circular economy

The efficient use of renewable resources and the reduction of the environmental impact due to the pollution that their exploitation entails, has been the subject of big debates within the government in the search for strategies that enable the application of good practices, both at the public and private levels, in the design of eco-friendly and eco-innovative products and services.

In that order of ideas, CONPES documents 3530 of the year 2008 and 3874 of November 2016 establish the national government public policy guidelines for the disposal of solid waste other than hazardous, hospital, mud and debris, with which said guidelines established in the aforementioned CONPES documents include the solid waste product of the factories; and the CONPES document 3866 of August 2016, which includes the national policy for productive development, which establishes the strategic axes in order to improve national productivity and strengthen relations between the different economic sectors.

Document 3530 refers to the national state regulatory frameworks through

which the state's concern for technical and environmental regulatory aspects is considered with the preference of promoting recycling and modifying production and consumption patterns in which generation of solid waste is minimized (CONPES, 2008) and also points out the need to create a national policy for the comprehensive management of solid waste and the provision of cleaning services in a planned manner, in which the following aspects are especially considered:

-To establish the minimum environmental conditions that must be met in each of the components of the public cleaning (garbage collection) service.

-To introduce a planning instrument for the sector, called the Regional or Local Plan for Comprehensive Solid Waste Management (PGIRS), through which the territorial entities must establish strategies, programs and projects that are sustainable in the short, medium and long term (CONPES, 2008, p. 5).

With these aspects, the concept of sustainability begins to be glimpsed and given relevance from the implementation of strategies, programs and projects in territorial entities in order to improve environmental conditions. However, public policies related to waste disposal and use are implemented separately through a linear economy model.

Thus, "society, companies and governments have approached sustainability as an objective with different industrial models and from a linear perspective. Even many of the efforts to solve environmental problems are usually reduced to corrective or *end of pipe* techniques and technological modernization that can buy time, but cannot by itself buy sustainability" (Huesemann, cited by Prieto *et al*, 2017, p. 86)

Said linear model, where production from raw materials is sold, used and discarded as waste, has difficulties associated with the scarcity of raw materials used in production and the growing demand for the land needed in order to locate final disposal sites. (CONPES, 2016a); short-term linear economy model of an extractive nature that depletes natural resources and the repercussions of which are mainly "related to climate change, loss of biodiversity, natural capital, land

degradation and pollution of oceans and water sources" (Departamento Nacional de Planeación, 2017, p. 10).

The authors: González, Mejía, and Méndez (2018) in their work: Taking advantage of wood waste, they carry out a broad study of the various uses that can be given to wood waste, determining the amount of waste generated by wood companies in Colombia and its possible use, according to the size, thickness and resistance to the transformation process, building a reference matrix of possible products made from wood waste, but from a Corporate Social Responsibility approach, and from the perspective of sustainable operations in companies both "economically, socially and environmentally, recognizing the interests of the different groups with which it relates and seeking the preservation of the environment and the sustainability of future generations" (González *et al.*, 2018, p.17).

While, in an evolution of the Colombian government's policy for the comprehensive management of solid waste, the CONPES 3874 document, proposes moving towards the circular economy so that the value of the products and materials may be maintained as long as possible in the productive cycle (CONPES, 2016a).

It is necessary for the advance from a linear economy model to a circular economy model, the articulation of public policies between the different levels of government. "Public policies implemented through public bodies linked to the administrative apparatus (system) of the State" (Lobelle, 2017, p. 85), and with the participation of the different social classes.

In relation to the above, in the CONPES 3934 document "Green Growth Policy", it is aimed at:

"achieving an approach to all civil society actors in order to encourage their participation in the implementation of green growth within the framework of a true Pact for Sustainability. This is how it is intended to reach the private sector with this document, to improve the environmental performance of productive activities; to academia, to promote research and development of new knowledge required for the transition towards this sustainability model; to the public sector, to develop the instruments

Table 3. Consulted documents of Colombian National public policy for the use of solid waste

Public entity in Colombia	Document
Congress of the Republic of Colombia	Law 1259. Published in the Official Gazette 47.208 of December 19th, 2008.
National Planning Department of Colombia	Guidelines and Strategies In Order to Strengthen the Public Cleaning (Garbage Collection) Service within the Framework of the Comprehensive Solid Waste Management. Conpes Document 3530 (2008).
National Planning Department of Colombia	National Policy for the Comprehensive Management of Solid Waste. Conpes Document 3874 (2016a).
National Planning Department of Colombia	National Productive Development Policy. Conpes Document 3866 (2016b).
National Planning Department of Colombia	National Use (Exploitation) Report-2016.
National Planning Department of Colombia	Green growth policy. Conpes Document 3934 of the year 2018.
National Planning Department of Colombia	Strategy for the implementation of the Sustainable Development Goals (SDG) in Colombia. Conpes Document 3918 of the year 2018.
Institute of Studies of the Public Ministry and General Procurator's Office	Introduction to public policies. Concepts and tools from the relationship between State and citizenship (2013).
Source: Authors own elaboration.	

and mechanisms that are necessary for the implementation of the policy; to the territorial entities, to promote the articulation of these guidelines in the territorial planning instruments; and to civil society organizations and citizens in general, to encourage the change towards sustainable consumption” (Departamento Nacional de Planeación, 2018, p. 5).

Given that, according to Vera (2020), “sustainability is effective and efficient if there is a real change in behavior of states, institutions, companies and people” (p. 4), the focus of national policy of the Colombian government for the comprehensive management of solid waste seeks to contribute to sustainable development (growth) and the mitigation of climate change four strategic axes, among which are:

“(I) to promote gradual progress towards a circular economy, through the design of instruments within the framework of the comprehensive management of solid waste; (ii) to promote citizen culture, education and innovation in comprehensive waste management as the basis for promoting prevention, reuse, and adequate separation at the source; (iii) to generate an institutional environment conducive to coordination between actors that promotes efficiency in the comprehensive management of solid waste, and (iv) to implement actions in order to improve the reporting, monitoring, verification, and dissemination of sector information in order to monitor this public policy” (CONPES, 2016a, p. 11).

Policy that aims from the comprehensive

management of solid waste in order to increase the value over time of products and materials within the production cycle, trying to minimize waste and the use of resources, in such a way that when a product ends its useful life it can be conserved during the economic cycle and reused repeatedly adding value to it.

The Colombian State through its public policies gives content to the responsibilities contracted internally with Colombian society and internationally for the purposes of achieving the Sustainable Development Goals (SDG) within the framework of the agreements reached in the United Nations General Assembly 2015.

In this sense, the CONPES 3918 document of the year 2018, establishes the guidelines and strategies for the implementation of the (SDG) in Colombia, among which there are the following: monitoring and reporting scheme supported by a management and results evaluation system coordinated by the National Planning Department; statistical strengthening plan for the implementation monitoring and review process; territorial strategy for the transversal inclusion of the sustainability concept in cities, regions and municipalities; dialogue and promotion of alliances with non-governmental actors (CONPES, 2018).

National public policy documents for the use of solid waste are summarized in Table 3.

Taking advantage of (using) solid waste, through the circular economy model in order to achieve sustainable development, the Colombian government promotes improvements in environmental, social and economic terms, while reducing water pollution, and air pollution, recovery of degraded soils; diseases are reduced in the populations surrounding landfills, improving their level and quality of life (Departamento de Planeación Nacional, 2017).

5. Conclusions

It concludes on the importance of including environmental problems on the government agenda, produced by pollution generated by solid waste, in order to formulate public policies to mitigate or solve these problem situations, in the context of moving forward towards the use of solid waste in the process of transition from a conventional economy to a circular economy. In this regard, it is of fundamental importance the articulation of public policies between the different levels of government, together with the comprehensive participation of the different social classes.

The research question is answered by identifying the strategies promoted by the Colombian government, through public policies in the transition towards a circular economy. The public policies of the Colombian government point to the commitment to activate production based on sustainable development (growth) through the cohesion of the three pillars of sustainable development: economy, society and environmental protection, together with the values system that promotes said cohesion.

Said public policies have been put within the framework of the development of strategies that make possible environmental sustainability in line with the precepts of the circular economy. In this sense, four strategic axes are established that contemplate progress towards the achievement of the circular economy strategy, starting from the citizen culture in order to promote reuse by giving added value to the products once they have completed a life cycle, coordination between the various political and social actors towards efficiency in the use of resources, and the actions that are necessary

in order to promote and verify compliance with public policy towards said development.

The national regulations for the use of solid waste are part of a national public policy for sustainable production and consumption in order to respond to and comply with the commitments assumed by the Colombian state at the international level in line with the 2030 Agenda and the objectives for the sustainable development approved by the United Nations Assembly in 2015, therefore, the effectiveness of the state is introduced as the main topic for the achievement of public policy in line with the analytical category to reduce, reuse, recycle (3R). Which implies a policy that corresponds to the linear production model, but with strategies in search of sustainability.

It is considered essential to highlight that these public policy strategies of the Colombian government need to be accompanied by various models, programs and incentive not coercive campaigns, aimed at both the general population, as well as large companies and entrepreneurs, so that in this way, said strategies may not only be embodied into laws the purpose of which tends to be the penalization of unwanted conduct.

The process of transition of public policies towards the achievement of the circular economy model passes, in addition to the political will, through the awareness of the different social actors about the benefits of the model for the economy, society and the environment as a whole, In this sense, it is necessary to use the means of diffusion, dissemination and information based on data analytics and democratization of information at the level of all levels of society.

6. Conflict of interest

The authors declare no conflict of interest.

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