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CIRCULAR ECONOMY AND THE SOCIAL MEANINGS OF SUSTAINABLE DEVELOPMENT IN MANTA, ECUADOR

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ABSTRACT

Faced with the structural limitations of the linear economic model, the circular economy presents itself as an alternative capable of transforming production and consumption dynamics towards regenerative schemes. This study adopts a contextual phenomenological approach to understand how social actors in Manta, Ecuador, experience and interpret the circular economy in their daily practices. Based on a qualitative analysis of the experiences of artisanal recycling managers, the study explores the experiences, perceptions and meanings attributed to their activities, beyond their instrumental function. The findings show that, in contexts of vulnerability, the circular economy is configured not only as an environmental strategy, but also as a subsistence practice loaded with social and symbolic meaning. This approach reveals how social meanings are constructed around sustainability and highlights the urgency of policies that recognise situated knowledge, promoting a just and inclusive transition towards a circular model rooted in local realities.

KEYWORDS: Circular Economy, Sustainable Development, Contextual Phenomenology, Situated Knowledge, Social Meanings.

1. INTRODUCTION

In recent decades, sustainable development has become a central focus of public policy, business strategy, and environmental governance at the global level. This approach, which seeks to balance economic, social, and ecological considerations, requires profound changes in models of production, consumption, and resource management. However, its application has been dominated by technocratic visions that propose corrective solutions without questioning the extractive nature and waste patterns of the current economic model (Almeida and Díaz, 2020). From a contextual phenomenological perspective, it is necessary to complement these visions with a closer understanding of how people live and interpret sustainable development in their daily practices. This perspective allows us to recognise the local, symbolic and affective meanings surrounding production, consumption and environmental care, especially in highly vulnerable contexts. In this framework, the transition to more sustainable models must include not only ecological criteria, but also the knowledge, experiences and social meanings that guide actions in each territory (Prieto et al., 2017).

Compared to the linear economic model, the circular economy represents a structural alternative with transformative potential. This proposal aims to replace the logic of producing, consuming and disposing with a regenerative system based on reuse, recycling and waste recovery. Beyond its technical and economic benefits, such as reducing environmental impact and generating value through innovation (Álvarez, 2023), it is essential to understand the circular economy from the experiences and meanings attributed to it by social actors in their daily lives. This dynamic involves a profound reconfiguration of current production systems, aimed at closing cycles and establishing more balanced relationships between natural systems and human activities (Sánchez et al., 2021). From a contextual phenomenological approach, this study focuses on analysing how the circular economy is experienced and interpreted in specific territories, in particular its potential to contribute to the achievement of the Sustainable Development Goals of the 2030 Agenda. To this end, the research combines a theoretical-empirical approach based on documentary review and the collection of social perceptions, with the aim of understanding not only the technical aspects, but also the transformative role that this model can play in the transition towards real and meaningful sustainability for the communities

involved.

The city of Manta, in the province of Manabí, is a strategic location due to its internationally renowned port, strong fishing industry, and growing tourism sector, which drives the local and regional economy. This dynamism has led to rapid urban growth, putting pressure on natural resources and marine-coastal ecosystems (GAD Manta, 2023). The city faces serious sustainability challenges, such as poor waste management, environmental pollution, and increasing exposure to climate change and uncontrolled urbanisation. Given this reality, comprehensive strategies are needed to balance economic development with environmental protection and social well-being. From a contextual phenomenology perspective, it is essential not only to analyse structural dynamics, but also to understand how local communities live, interpret and make sense of these problems and possible solutions. In this context, the circular economy presents itself as an alternative for reconfiguring production and consumption systems, promoting efficient use of resources, waste reduction, and greater environmental resilience. These elements are essential for building a sustainable development model adapted to the social, cultural, and ecological characteristics of the territory.

To address the transition to this model in cities such as Manta, this study adopts contextual phenomenology as its analytical framework. This perspective allows us to understand the circular economy not only from a technical standpoint, but also as a lived experience, rich in meaning and social practices (Cruz et al., 2024). Phenomenology, which originated in the study of conscious experience, has become a useful tool for exploring how people deal with issues such as sustainability, waste, or reuse in their daily lives (Vier et al., 2021). Thus, the circular economy can be analysed beyond institutional discourse, recognising the ways in which people interpret and apply these concepts in real contexts. This implies that the adoption of circular models does not depend solely on technologies or policies, but also on values, beliefs, previous experiences, and shared meanings that influence how circularity is understood and practised (Méndez, 2023; Vier et al., 2021). In this sense, contextual phenomenology allows for a critical and situated view that helps to understand both the opportunities and limitations of the circular economy as an alternative to the linear model, in dialogue with the specific realities of territories such as Manta.

This study responds to significant gaps in local and regional literature regarding the understanding

of the circular economy in urban contexts such as the city of Manta. Although regulatory advances and technical initiatives aimed at sustainability have been developed, there is still little attention paid to the symbolic, cultural and community factors that condition the social appropriation of these models (Leitão, 2015). Most research on the circular economy relies on quantitative, engineering or management approaches, which, while valuable, do not allow for an in-depth understanding of the complexity of socio-environmental transformation processes from the perspective of those who experience them. In this context, there is a need to incorporate alternative approaches such as contextual phenomenology, which allows us to explore how different institutional, community and economic actors experience, interpret or re-signify the discourses and practices associated with sustainability. Understanding these situated experiences is key to designing strategies that are more legitimate, effective and consistent with the social realities of the territory (Rojas, 2021).

This work, therefore, proposes an interpretation that integrates both structural and symbolic dimensions, recognising that the transition to a circular economy is not only a technical change, but also a deeply cultural and relational process rooted in specific ways of inhabiting and signifying the territory.

The purpose of this research is to interpret, from a contextual phenomenological perspective, the foundations, challenges and possibilities of the circular economy as a model of sustainable development in the city of Manta. This aim seeks to go beyond purely technical or functional approaches, addressing the circular economy as a multidimensional phenomenon that involves cultural meanings, lived experiences and concrete social practices. In this sense, the analysis is not limited to evaluating its operational viability, but rather aims to understand how the social dynamics that enable or hinder its effective and sustained implementation in the territory are constructed, negotiated and deployed. This approach reveals the subjective, relational and symbolic conditions that shape the circular economy as part of local processes of socio-environmental transformation.

2. MATERIALS AND METHOD

The methodological approach adopted in this study is qualitative and interpretative, based on the principles of critical hermeneutics as an epistemological approach. Hermeneutics is used not

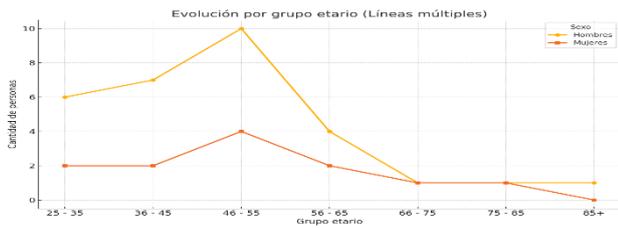
only as a method of textual analysis, but also as a way of understanding the construction of social and symbolic meanings around the circular economy and its contextual implementation in the city of Manta. Understanding is prioritised over measurement, recognising the importance of language, situated experience and social interaction in the construction of knowledge (Creswell & Poth, 2016).

The population included community representatives and people engaged in artisanal and technified recycling. The sample was intentional and theoretical, selected for its direct experience and ability to provide valuable information. Forty-six respondents were selected, a number consistent with theoretical and empirical saturation criteria. This figure was supported by recent studies by the Circular Foundation by Ichthion, conducted in March 2021, which indicate that between 40 and 50 respondents are usually adequate to achieve thematic saturation in homogeneous populations (Hennink & Kaiser, 2022).

The fieldwork was carried out between March and July 2021, using a methodological triangulation approach that combined participant observation, semi-structured interviews, and documentary analysis. In March, on-site visits were made to the target group's operational facilities in order to gather qualitative information on the processes of solid waste collection, separation, and recycling. These visits made it possible to identify the main critical points in the operational chain.

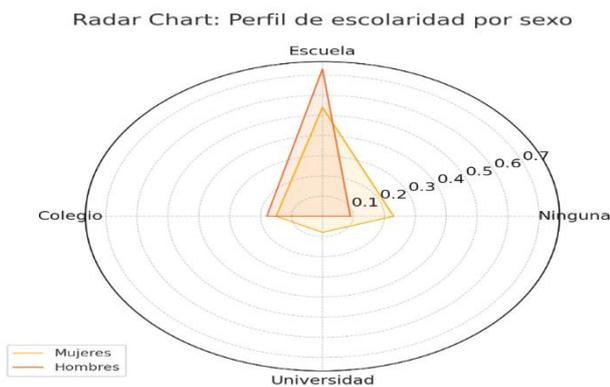
In April, a process characterisation report was prepared, which was a key input for the formulation of the comprehensive diagnosis and the design of optimisation alternatives, implemented in May. These alternatives took into account technical, organisational and cultural aspects, directly influencing the efficiency of the system. In June, the implementation of these improvements was monitored through the preparation of a progress report that documented the changes observed in operational practices, community participation and logistical performance. Data analysis was performed using thematic coding and hermeneutic content analysis, based on accounts obtained from interviews, field observations, and institutional documentation. This process allowed us to identify emerging categories related to circular practices, structural barriers, social imaginaries about sustainability, and perceptions of change. An abductive logic was applied that integrated theory and data iteratively, in accordance with the principles of contextual interpretation (Kvale, 2012; Villarreal & Cid, 2022).

3. RESULTS



Graph 1: Number of respondents by gender.

Graph 1 shows a higher participation of people between the ages of 36 and 55, with a marked male predominance. This pattern suggests that practices associated with the circular economy in the city of Manta are concentrated among actors in their prime working age and in roles historically linked to the male gender. The low presence of young people and older adults reveals generational gaps that affect not only the functional distribution of work, but also the different ways in which sustainability is conceived and experienced. From a contextual phenomenological perspective, these figures transcend their quantitative value, as they are an expression of social and cultural structures that define who is recognised as a legitimate agent of transformation within the circular model. Inclusion or exclusion in these processes is mediated by meanings attributed to age, gender and productive role, which highlights the need to promote more inclusive, intergenerational and situated strategies capable of incorporating the diversity of trajectories, experiences and knowledge present in the territory.

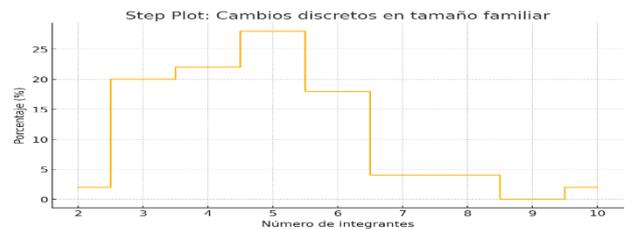


Graph 2: Level of education by gender.

Graph 2 shows that the educational levels of respondents are predominantly low, with a marked concentration in primary education, especially among men (73%). Although female participation is in the minority, it shows a slight diversification towards secondary and university levels of education. From a contextual phenomenology

perspective, this distribution is not only a structural variable, but also expresses different ways of experiencing, understanding and interpreting the circular economy, mediated by the available educational capital. The frameworks of meaning around sustainability, the value of waste or the principles of circularity are not generated exclusively from technical content, but emerge from life trajectories, situated experiences and everyday knowledge.

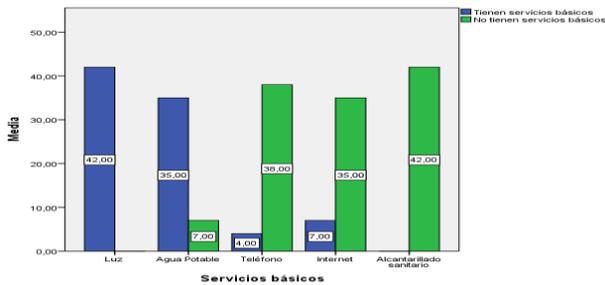
In this context, while low educational attainment may represent a barrier to access to specialised information, it also highlights the urgency of developing communication and training strategies that recognise the cultural and educational realities of the territory. Far from being interpreted as a deficiency, these conditions should be understood as starting points for a pedagogy of sustainable development that engages with existing knowledge, fosters social appropriation of the circular model, and promotes meaningful transformations from an inclusive and situated perspective.



Graph 3: Family structure.

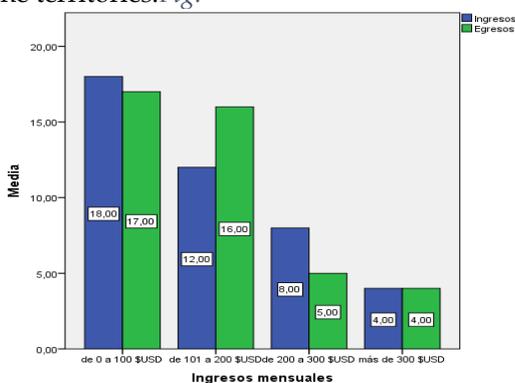
Graph 3 reveals that the largest proportion of respondents live in households consisting of five people (28.57%), this being the most common family structure among participants. In contrast, households with six members represent a smaller proportion (11.90%), suggesting that large families are not predominant in this context. This family configuration has significant implications when considering that respondents participate as artisanal managers within the recycling chain, collecting waste for delivery to technical managers. From a contextual phenomenology perspective, this activity cannot be understood merely as an economic subsistence strategy, but as a socially situated practice in which recycling acquires a collective and symbolic value. In these households, recycling not only generates income, but also produces practical knowledge, emotional bonds and a culture around the value of discarded materials. Thus, waste transcends its status as refuse and becomes a significant element within a relational economy that articulates family care, environmental responsibility, and symbolic

recognition. Recognising this experiential dimension allows us to understand the circular economy not as a normative abstraction, but as a reality constructed from the everyday and the domestic.



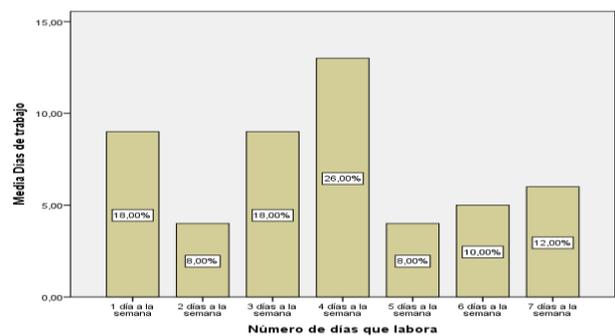
Graph 4: Coverage of basic services.

Graph 4 reveals that, although all respondents have access to electricity, significant gaps persist in other basic services: only some have access to drinking water and the internet, and none have access to sanitary sewerage. This situation reflects precarious structural conditions that directly impact the material and symbolic sustainability of the daily lives of artisanal recycling managers. From a contextual phenomenology perspective, these shortcomings not only compromise quality of life, but also influence how the concept of sustainability is experienced and reinterpreted based on concrete experiences of exclusion. It is paradoxical that those who play a key environmental role in the circular economy chain live in contexts marked by institutional neglect and a lack of protection of basic rights. This contradiction shows that sustainability, far from being a universal ideal, takes on diverse and often conflicting meanings, depending on one's place in the social structure. Understanding this tension between environmental recognition and structural exclusion is essential to moving towards circular models that are not only technically effective, but also socially just and deeply rooted in the lived reality of the territories. Fig.



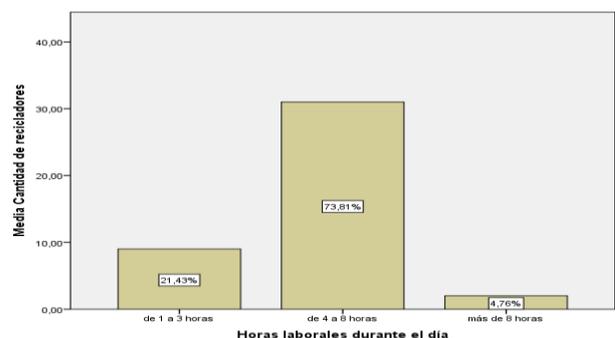
Graph 5 Income and expenditure from recycling activities

Graph 5 shows that most respondents earn between 101 and 200 dollars per month, and a significant proportion earn less than 100 dollars. These incomes reflect a subsistence economy, with no possibility of saving or stability. Beyond the economic aspect, this precariousness influences how recyclers perceive their work: not as an environmental action, but as a means of survival. This reality contrasts with formal discourses on sustainability, revealing a gap between theory and actual conditions. Overcoming this disconnect requires public policies that value their work and promote social justice, recognising the circular economy from the experiences of those who make it possible.



Graph 6: Number of days spent on recycling tasks.

Graph 6 shows that most recyclers in Manta work four days a week (26%), while others work one or three days (18% each), and only 12% work seven days a week. This distribution reflects a flexible and fragmented work dynamic, far removed from formal employment models. Recycling adapts to each person's social, family and urban conditions and does not follow a standard logic. This flexibility represents both a subsistence strategy and a meaningful way of life, where work is combined with caring for the home, accessing resources and community organisation, challenging traditional views of sustainable development.



Graph 7 Hours spent recycling during the working day

Graph 7 shows that most recyclers in Manta work between 4 and 8 hours a day (73.81%), which indicates a significant commitment, although most do not work exhausting hours. This activity is not sporadic or secondary, but a constant occupation that demands time and effort. However, despite its importance, it is carried out in informal conditions and without labour guarantees. This reflects a contradiction in the sustainable development model, where those who sustain the circular economy face structural inequalities. The working hours reveal not only commitment, but also the urgent need for recognition and social protection for these key actors.

4. CONCLUSIONS

The results of this research show that the circular economy in Manta does not respond to formal institutional planning, but rather is configured as a situated social practice, built on the everyday experiences of artisanal recyclers. From a contextual phenomenological perspective, it is evident that circularity does not arise from abstract regulatory frameworks, but rather from lived processes of re-signification of waste as a resource, guided by economic necessity, practical knowledge and community ties. This reality highlights the gap between the technical discourse of sustainability and its concrete application, revealing that participation in the circular economy is marked by conditions of exclusion, but also by local knowledge that sustains these practices.

In this sense, it is urgent to rethink institutional strategies from a more contextualised approach that recognises the diversity of experiences, the cultural values present and the key role of historically marginalised actors in the construction of sustainable alternatives. Only then will it be possible to move towards a more just and inclusive circular economy model that is rooted in the realities of the territory.

On the other hand, analysis of the living conditions of waste pickers reveals an economy marked by precariousness: low incomes, limited expenses, and unequal access to basic services create an environment of high vulnerability. From a phenomenological perspective, this precariousness not only affects material conditions but also influences how waste pickers understand and experience their role within the city. They recognise themselves as essential to sustainability, but at the same time feel invisible and excluded from the system. This tension between symbolic recognition and structural exclusion demonstrates that the principles of sustainability cannot be applied universally or neutrally, but must be adapted to

specific cultural and social contexts in order to respond adequately to local complexities. The findings show that artisanal waste managers do not limit themselves to the mere collection of solid waste, but construct complex and situated meanings around their activity. From a contextual phenomenological perspective, it is revealed that these actors attribute moral, economic and ecological value to recyclable materials, re-signifying waste as a socially useful good laden with lived meaning.

This symbolic construction of recycling challenges the dominant narrative that reduces their work to a mere technical action, allowing for a broader understanding of sustainable development that integrates everyday experiences, perceptions, and practices from below. Recognising this agency is essential to making visible and valuing those who have historically been marginalised and excluded from official sustainability discourses and frameworks.

The extended family structure of artisanal waste managers is a fundamental support for the continuity of their practices, as the collection, sorting and transport of waste often involves several members of the household, thus configuring a collective and situated dimension of environmental work. From the perspective of contextual phenomenology, this dynamic reveals that sustainability is constructed not only in the public or institutional sphere, but also in the domestic sphere, where values, roles and meanings related to caring for the environment are negotiated and re-signified. This approach highlights the importance of circular economy policies transcending the idea of the individual as the sole unit of action, in order to incorporate the relational and community logic that underpins these everyday practices.

The study highlights structural gaps in local sustainability policies, especially regarding the inclusion of informal actors in the design and implementation of circular strategies. From the perspective of contextual phenomenology, this omission is interpreted as a manifestation of technocratic rationality that privileges standardised and universalist models, rendering situated forms of knowledge and lived experiences invisible. Artisanal managers possess practical knowledge, experiences, and practices that can enrich the transition towards more equitable and ecologically responsible development models. Their integration not only improves operational efficiency but also constitutes a matter of epistemic justice and symbolic recognition within the broader processes of social construction of sustainability.

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