Challenges in Sustainability
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Circularity and Regenerative Tourism as Key Instruments for Sustainability in the Rural Areas of Manabí, Ecuador

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Received: 10-26-2025 **Revised:** 12-08-2025 **Accepted:** 12-22-2025

Citation: Bravo Giler, M. A. & Entenza, N. P. (2026). Circularity and regenerative tourism as key instruments for sustainability in the rural areas of Manabí, Ecuador. *Chall. Sustain.*, *14*(1), 106–122. https://doi.org/10.56578/cis140107.

Abstract: Circularity and regenerative tourism are instruments that influence the sustainability and resilience of the settings where tourism activities take place. Despite this, these instruments fail to consolidate all the theoretical integrity that corresponds to them as key elements for achieving sustainable development in rural contexts. Hence, the purpose of this study is to theoretically and methodologically re-evaluate the guiding principles of circular and regenerative tourism as tools to guarantee the sustainability and resilience of tourism. It highlighted the tangible and intangible resources of rural communities and developing potential that has not yet been sufficiently explored. The deductive method was used along with other methods derived from practices, such as document reviews, observations, surveys, interviews, and scaling. Techniques such as synthetic analysis, abstractions, comparisons, and generalisations were used to study the potential of circularity and regenerative tourism for sustainable tourism development in the rural parishes in the province of Manabí. The impact on improving the living conditions in host communities were also revealed. To conclude, the revaluation of the theoretical and methodological elements, and principles associated with circularity and regenerative tourism as instruments could help achieve sustainable development in rural communities.

Keywords: Productive agroecology; Rural innovation; Waste reduction; Slow tourism; Energy recovery

1. Introduction

The global tourism sector has begun to experience a significant paradigm shift towards other leisure alternatives not related to the conventional model of mass tourism, which often exceeds carrying capacity, and towards approaches focused on territorial value and advanced sustainability. In this transition, rural and nature tourism is particularly relevant, as it seeks to move customers away from large concentrations of visitors. Currently, tourism activity focuses primarily on being efficient, making effective use of endogenous resources, reducing the amount of waste, and extending the life cycle of materials in the tourism value chain.

Although there is a wealth of literature on advanced sustainability theory, there remains a gap in research applied to the socio-economic and geographical context of the Ecuadorian coast. The current literature shows a divergence and focuses mainly on urban or high-investment contexts. This conceptual and methodological fragmentation makes it difficult to address integrated methodological models that allow the implementation and scalability of sustainable tourism inspired by circular and regenerative principles in rural subsistence communities with limited resources, especially in Manabí (Kumar et al., 2025).

In the current body of knowledge, the missing link is an integrated methodological framework that connects the assessment of the territory's endogenous resources, as described in the development and land use plans of decentralised autonomous governments, with the creation of a circular and regenerative tourism business model that rural communities can socially adopt. The practical benefit is to provide a replicable diagnostic tool that allows decentralised autonomous governments and rural communities in the province to create business models and

investment projects for circular rural tourism with great potential for economic viability and socio-ecological resilience.

The objective of the research is to strengthen the theoretical and practical framework of circular and regenerative tourism, as these are tools that contribute to sustainability in rural environments. This is achieved through the proper management of endogenous resources, reuse, recycling, and revitalisation of sustainable tourism activity in rural communities. In particular, this case study in the rural parishes of Manabí made a theoretical and methodological contribution by suggesting a comprehensive analytical framework that combines the evaluation of endogenous resources with the operational basics of regenerative tourism and the circular economy (Mishulina, 2023; Vallés, 2020).

1.1 Circular Economy in Tourism

The circular economy emerged in Europe as a result of the significant pressure on historic cities. Such pressure arose from excessive tourism and the application of a systemic perspective to the problem of social inequalities and the ecological and economic crisis by identifying and analysing tools linked to circularity (Ingrassia et al., 2023; Ortiz Martínez & Mazó Quevedo, 2025). This tool emerged as a new conceptual foundation in the context of sustainable tourism, and its establishment is increasingly important in the complex world of tourism services and commercial relations. Subsequently, hotels that adopted comprehensive circular approaches experienced substantial improvements in efficiency and customer satisfaction (Florido et al., 2019; Fusco Girard & Nocca, 2019; Siriwong et al., 2025).

Circularity in rural tourism is defined as the application of the principles of circular economy in rural destinations to promote the efficient use of resources, reduce environmental impact, and improve the territory and its communities. It encompasses the fundamental elements that characterise the social responsibility of tourism, understood as the sector's ethical commitment to host communities and the natural environment, where community participation is key to the development of tourism projects and businesses (Alarcón & Cole, 2019; Cortés-Gómez et al., 2022; Sánchez et al., 2021). Circular rural tourism is a way of developing rural communities, historically anchored in forms of production in the primary economic sector. Circularity opens up a holistic view of communities and their inhabitants, sustainability, environmental protection, and the social responsibility of the actors, who involve in combining and raising the standard of living and quality of life of host communities (Mihai, 2023).

The circular economy is based on several interrelated pillars: (i) the recovery and extension of the useful life of resources as a central principle that seeks to replace the traditional linear model of take, make, and dispose; (ii) recycling to recover waste materials and reintroduce them as raw materials into the production cycle, which represents an opportunity to close the life cycle of materials that can no longer be reused or repaired; (iii) the use of renewable energy sources as a fundamental pillar in the transition towards sustainability in the context of rural tourism and local development; (iv) resource efficiency as an operational sustenance that is fundamental to sustainable management and is defined as the ability to produce more goods and services with fewer natural resource inputs while simultaneously generating less waste and emissions; (v) shared platforms as a technological and logistical driver of what is known as the collaborative economy to facilitate efficiency by maximising the utilisation of assets that would otherwise remain idle, thus reducing the need to acquire new resources; and (vi) the product as a service forming part of an advanced strategy that represents a fundamental change in the business model, moving from the sale of property to the sale of performance or function (Bux & Amicarelli, 2023; Ellen MacArthur Foundation, 2019).

For circular rural tourism to be successful, it is necessary to have a perspective based on project ownership and community empowerment, in order to ensure that benefits are distributed equitably. It is important to invest in education and continuous training so that communities have real power when it comes to decision making. Social responsibility actions in the field of tourism fall within this axis, demanding an ethical obligation to host communities and the natural environment (Alarcón & Cole, 2019; Arnstein, 1969; Singgalen et al., 2019). For circularity to be viable, it is necessary to consider the interaction of three groups of determining factors: (i) the potential of endogenous resources that provide the authenticity sought by tourists and justify travel to rural areas; (ii) social capital based on governance, to ensure the community's ownership of the project, which is the key to its long-term sustainability and the equitable distribution of benefits; and (iii) circular innovation that allows the transformation of waste or by-products into new sources of income, thus rendering the model profitable and distinctive. Other elements to be considered may be the supply of zero-kilometre resources and active environmental protection as foundations of circularity in the context of rural tourism (Bodnár, 2013; Paresishvili et al., 2017; Royo-Vela, 2009; Trukhachev, 2015).

To address the remaining gaps, most of the literature on the circular economy in tourism focused on implementation in urban destinations with heritage and large hotel chains or in tourist resorts that require high investment and weak implementation of inclusive governance mechanisms for strengthening social capital at the local level. Both issues were well identified in the literature as essential pillars for the implementation of circular

rural tourism. Existing models failed in terms of the analytical integration of the assessment of territorial (endogenous) resources with the measurement of social capital and the empowerment capacity of communities (Mejía Ochoa et al., 2024; Fusco Girard & Nocca, 2019; Hall & Page, 2014; Izquierdo-Gascón & Rubio-Gil, 2022).

In summary, circularity in tourism is a relatively new tool. It undergoes substantial improvements in the management of resources, economic activity, and visitor services, as well as achieving positive environmental performance, especially when it comes to tourism in rural areas that depend on the natural environment for the development of tourism. The main weakness is the existing methodological gap that hinders the systematic and integrated assessment of the availability of endogenous resources, social potential, the capacity for community empowerment, and alternatives for finding financial support for the investments required in the interest of circularity. This methodological gap enhances the difficulty for local actors to make informed decisions to sustain circularity, which justifies a comprehensive analytical framework.

1.2 Regenerative Tourism

At the end of the last century, regenerative tourism emerged as an option to counteract the climate crisis and as an advance in sustainable tourism to incorporate concepts of ecological and socio-economic restoration beyond simply reducing environmental impacts. During those years, agroecology and permaculture inspired tourism approaches based on soil restoration, biodiversity, and biomimicry with the application of natural systems to tourism models. The advancement of regenerative tourism shows a paradigm shift from a passive position of doing no harm to directly contributing to well-being. Although it is still a developing concept, its acceptance is increasing in innovative destinations and among conscious travellers (Lyle, 1996; Martínez & Porcelli, 2018; Souza et al., 2020).

Regenerative tourism is an innovative perspective that transcends conventional sustainability, going beyond the reduction of adverse effects to address the recovery and revitalisation of ecosystems, communities, and local economies. It focuses on five key principles: the restoration of ecosystems to promote the recovery of degraded areas through reforestation, biodiversity conservation, and the use of renewable energy sources; in this context, there are hotels that incorporate regenerative agriculture to supply local organic products; circularity of tourism services in resource management, encouraging the use of biodegradable or recycled materials in the construction of accommodation, closed water systems, and zero waste management; community empowerment to involve local communities in the decision-making process and achieve economic benefits through fair employment and local trade; innovation in tourism by designing educational experiences for travellers on regenerative activities, such as conservation volunteering or circular economy workshops; and multisectoral collaboration through partnerships among governments, businesses, and non-governmental organisations to create regenerative policies and business models, such as regenerative tourism certifications endorsed by international organisations (Day et al., 2021).

In summary, regenerative tourism emerged as an environmental alternative. It could reduce the effects of the climate crisis by incorporating innovative concepts associated with the restructuring of the ecological and socio-economic context. It goes beyond the reduction of environmental effects and represents a shift from a passive position to one of direct contribution to socio-environmental well-being. Its articulation with the principles of the circular economy not only minimises damage but also enhances the generation of positive effects, thus turning visitors into agents of transformation. This is a fundamental pattern for the future of the sector, especially when it comes to vulnerable places such as rural areas. However, the missing link lies in the lack of a methodological tool to connect citizen participation and combine the technical evaluation of endogenous resources with the circular and regenerative business vision in the specific geographical context of Manabí. Therefore, the contribution of this study was framed by transferring the theory of advanced sustainability into regional practice.

2. Methodology

The research was carried out between October 2024 and June 2025, within the geographical boundaries of the province of Manabí, located in the centre of Ecuador's coastal zone. It extends on both sides of the equator from 0°25' north latitude to 1°57' south latitude and from 79°24' west longitude to 80°55' east longitude.

The territory of the province forms part of the political-administrative system in Ecuador as a first-level division, with an area of 19,516.6 km^2, representing 7.36% of the total area in the country, and a road network of approximately 1,222.13 km, rendering it the fourth largest province in terms of territory. It borders the province of Esmeraldas to the north, the provinces of Santo Domingo de los Tsáchilas, Los Ríos, and Guayas to the east, the province of Santa Elena to the south, and the Pacific Ocean to the west. The coastline is 350 kilometres.

The total population is 1,592,840 inhabitants, according to data from the population and housing census conducted in 2022. The province is divided into 22 cantons, 45 urban parishes, and 56 rural parishes, where a significant part of the population is concentrated. The city of Portoviejo is the provincial capital and, together with the cities of Manta and Montecristi, forms the largest conurbation in the territory.

2.1 Approach and Methods Applied

The study adopted a mixed approach, combining qualitative and quantitative research. This method was chosen because it involved analysing a complex and multi-variable phenomenon, which required an understanding of both its magnitude and generality (quantitative) and its significance in terms of processes and contexts (qualitative). The methodology ensured an in-depth understanding of circularity and regenerative rural tourism as essential tools for sustainability in the sector and allowed us to overcome the limitations inherent in qualitative and quantitative methods separately, when addressing the research problem.

The deductive method was applied, as it permitted analysis of the scientific problem and examination of general theories related to circularity as well as regenerative rural tourism from the premises of sustainability. It was possible to identify the objectives, design the hypothesis, and develop the results to reach conclusions on the topic studied following a socio-critical paradigm. Observation allowed us to address the difficulties and problems related to circularity and regenerative tourism associated with the principles of sustainability in the rural sector (Garg, 2016; Hernández Sampieri et al., 2014).

A detailed literature review was conducted to study various variables related to circularity and sustainable tourism regeneration in the rural context. It allowed analysis and statistical processing of the data derived from the document review, in order to obtain valid conclusions about rural parishes and the significance of rural circular and regenerative tourism for them, as well as its relationship with sustainable tourism as a requirement for the integration of these concepts into tourism research. The results obtained contributed to the strengthening of existing theories and the advancement of science in the field of sustainable local community development.

To carry out a systematic review of the literature, an algorithm was established based on the protocol proposed by Biolchini et al. (2005), which consisted of five steps: formulation of the research question; search strategy; selection of studies; extraction of information; and summary of results. This was adopted because it provided a structured and systematic framework for the data extraction and analysis phase of publications. It was a tool that was recognised in software research methodologies and was suitable for the bibliographic study required for the research.

Once the research problem had been established, in line with the authors' suggestions (Biolchini et al., 2005; Garg, 2016; Hernández Sampieri et al., 2014), an extensive bibliographic review of the documentation available on the Internet was carried out. Articles in different languages on the topics that form the basis of the research were consulted. The main descriptors used were: 'regenerative tourism' AND 'rural circular economy'; 'tourism' AND 'regenerative design'; 'sustainable tourism' AND 'regeneration'.

2.2 Research Technique

A research technique is understood to be the procedure or particular method of obtaining data or information (Arias, 2012; Garg, 2016); under this concept, the techniques applied for data collection were as follows:

A systematic and descriptive literature review was conducted to analyse the information contained in the documents consulted. It allowed the information to be organised and classified, as well as the necessary data to be used as the basis for the research process. To this end, in all cases, files were created with the most relevant aspects to complement the research.

Through the review of primary information, the statistical data used in the research was extracted from the content of the reports of the National Institute of Statistics and Census of the Republic of Ecuador (Gobierno de Manabí Desarrollo y Equidad, 2024). The decision to use the statistical data contained in these reports for this research was justified for three fundamental reasons, which have to do with the official nature, representativeness, and contextualisation of the findings in the Ecuadorian environment, particularly in Manabí.

Survey is defined as a technique that seeks to obtain information provided by a group or sample of subjects about themselves or in relation to a specific topic (Arias, 2012). In the case of the 250 tourism stakeholders, the objective of the survey was to determine their attitude towards circular and regenerative rural tourism. For the group of 35 respondents distributed among 7 parish authorities, 14 tourism entrepreneurs, and 14 community residents, the objective was to define their criteria regarding the meaning and importance they attached to circular and regenerative tourism. In the case of the 20 tourists, a semantic differential was applied to measure their attitudes, perceptions, and connotations about the object of the study.

The three instruments were chosen because of their ability to convert subjective perceptions into accurate quantitative data related to circularity and regenerative tourism in the complex rural context. They facilitated the measurement of participants' views of highly complex and diverse issues, such as the circular economy and regenerative tourism in rural areas. By assigning numerical values, it was possible not only to establish whether people agreed, but also the level of intensity of that agreement. In this way, abstract concepts were transformed into numerical values, allowing objective statistical evaluation with statistical data management tools such as Statistical Product and Service Solutions (SPSS).

In the context of the rural parishes of Manabí, surveys were efficient tools for obtaining a significant sample

related to the research. Information was collected from 300 respondents, including tourism stakeholders, parish authorities, tourism entrepreneurs, community residents, and visitors who were part of the selected intentional sample. This number of respondents was difficult to achieve through in-depth interviews in the rural context of the province of Manabí. With this available database, the results could draw more solid inferences related to the overall view of the respondents, adding validity to the research work.

A 5-point Likert scale with 15 items was used to evaluate the 250 surveys of tourism stakeholders. The instrument allowed the measurement of people's attitudes towards the phenomenon under study. Each of the items was evaluated on a five-point scale as follows: strongly agree (SA = 5 points), agree (A = 4 points), not sure (NS = 3 points), disagree (D = 2 points), and strongly disagree (SD = 1 point).

For the statistical interpretation of the survey results, exploratory factor analysis was used because it allowed evaluation of the latent construct, determined the existence of a single dimension associated with circular and regenerative tourism, developed the evaluation of the structural validity of the scale, verified whether the elements explain a powerful common factor, and performed the analysis together with reliability from Cronbach's α.

The following tests were not applied: *t*-test/ANOVA because the proposed objectives do not aim to carry out an evaluation between groups; correlations by individual because it is not individual data; regression because the dependent variable is not continuous; and χ^2 only guarantees a partial result, being useful for frequency, but does not guarantee the objective of internal structure.

The internal reliability analysis derived from the homogeneity of the factor loadings was 0.95α, which demonstrated excellent reliability, in line with well-constructed scales in social research (Tavakol & Dennick, 2011). The high reliability of this instrument indicated that it was appropriate for comparative research between parishes and communities, as well as for conducting impact analyses of projects related to circular tourism, long-term evaluations, and sustainable territorial planning processes. Therefore, the scale could be considered a robust instrument for programmatic and applied research related to sustainable development at the community level.

To interpret the 35 surveys conducted with parish authorities, tourism entrepreneurs, and community residents, a descriptive/verbal scale consisting of three levels was used: very important (VI), relevant (R), and irrelevant (I). This is a common practice in mixed (qualitative-quantitative) research, especially when applied to experts or community leaders, as it guarantees methodological and practical advantages that strengthen the validity of the results. By reducing the options from five to three levels, respondents do not need to qualify their answers, as the difference between 'irrelevant' and 'very important' is radical and easy to process. By preventing the frequent error of long scales, in which respondents cannot clearly differentiate between the different levels, it ensures less ambiguity.

Ordinal categorical qualitative data were presented and organised into three population groups: parish authority (PA); tourism entrepreneur (TE); and community resident (CR). Three categories were evaluated by each group: very important (VI); relevant (R); and important (I). The data were presented as absolute frequencies rather than averages or continuous scores. Therefore, the nature was ordinal categorical. There were three independent groups and each item was a categorical variable with three levels. This situation clearly pointed towards comparison tests for frequencies in categorical distributions.

The Chi-square test of independence (χ^2) was used to interpret the survey of parish authorities, tourism entrepreneurs, and community residents because the data corresponded to categorical frequencies. The groups were independent; the categories were ordinal but behaved as nominal for χ^2. There were no continuous data or repeated subjects; and parametric tests, correlations or exploratory factor analysis could not be applied.

To evaluate the semantic differential applied to the 20 tourists intentionally selected for the sample, a bipolar scale was established. Although smaller than the Likert scale, this scale offered specific strategic advantages that went beyond a conventional survey. While the Likert scale measured the degree of agreement, the semantic differential measured the tourist's attitude and emotional charge towards the circular and regenerative rural tourism model in Manabí. This type of scale inferred not only whether the tourists agreed with the project, but also how they felt about it, and could confirm whether the concepts of circularity and regeneration were perceived by the market as real benefits or simply as theoretical concepts.

For the statistical interpretation of the semantic differential applied to tourists, the Chi-square goodness-of-fit test was used because the items did not compare sets and the internal distribution of the responses was analysed. χ^2 was appropriate for frequencies and the response categories were qualitative ordinal. It allowed the establishment of whether the observed distribution differed significantly from a uniform distribution or from one that was theoretically expected. It was the norm in tourism perception research, in which the predominant trend in responses was examined (Agresti, 2018; Field, 2017).

The interview technique was used to determine the level of knowledge and assessment of specialists in circular and regenerative tourism regarding the relationships between circularity and the principles of sustainability. The evaluation of the interview instrument (interview guide) was based on five aspects and organised, according to the availability of the informants. Digital recordings were used to manage the information, so as to facilitate the processing and analysis of the information provided by the interviewees.

SPSS version 2.4 software was used to manage the statistical data. This tool was selected because it was widely

used by researchers in various disciplines, such as social sciences, marketing, research, and business analysis. This software facilitates a variety of statistical analyses, from descriptive tests to complex inferential tests, and allows the graphical representation of data for better comprehension and understanding.

Triangulation was used as a technique to obtain convergence patterns, which allowed proper interpretation of the data and corroborated the criteria of the actors involved, in relation to circular and regenerative tourism as well as its importance for the development of rural communities. This could reduce the possibility of misunderstandings by avoiding the production of redundant information during the collection, processing, analysis, and discussion of the data.

The population consisted of those involved in tourism activities in the province of Manabí, to ensure economic viability for the selection of the sample and the research work to be carried out. Although the territory of Manabí has 223 natural and cultural tourist attractions, as well as a rich and ancient gastronomy, the cantons of Jama, Sucre, and Pedernales experience low sales compared to Manta and Portoviejo, which lead in sales despite having fewer tourist resources (Instituto Nacional del Patrimonio Cultural, 2023). More than 50% of the tourist attractions in the province are concentrated in eight of its cantons, and more than 30% of the registered attractions are grouped in only three of them (Manta, Portoviejo, and Chone).

The cantons of the province of Manabí made sales from tourist services during 2022, amounting to USD 185.8 million, but of these, 165.2 million (88.9%) were concentrated in the cantons of Manta, Portoviejo, Chone, Jama, Sucre, El Carmen and Puerto López. The remaining 11.1% of sales were made in the other municipalities.

The analysis of the above permitted the selection of a non-probabilistic sample of seven rural parishes in the municipality of Portoviejo, whose general sociodemographic data are shown in Table 1.

Table 1. General sociodemographic data of the rural parishes selected for the sample

Rural Parishes	Extension (km^2)	Population	Poverty (UBN*)	Illiteracy
Pueblo nuevo	3698	4181	92.3%	7.8%
Río Chico	9095	17140	90.0%	5.3%
San Plácido	139.08	8180	93.8%	7.9%
Chirijos	60.7	2717	99.1%	8.4%
Calderón	120.87	16848	88.4%	5.4%
Alajuela	31.08	4714	87.1%	6.7%
Crucita	61.93	16997	83.0%	5.0%

Note: * Unmet Basic Needs; Adapted from GADM Portoviejo (2023)

From the parishes included in the sample, 250 subjects willing to collaborate were selected as a non-probabilistic sample, including parish authorities, actors socially involved in rural tourism ventures and projects, specialists in tourism circularity and regeneration, as well as community residents.

For the personal interviews, five subjects were selected from each of the 35 parishes studied. The composition of the sample sought included one representative of the parish authority, two owners or administrators of tourism enterprises, and two residents of the community from each parish.

Of the 35 subjects who voluntarily agreed to be interviewed, 65% were male and 35% were female. Five per cent had completed higher education, 25% had completed secondary education, and 70% had completed basic education. In terms of age, 50% were under 20, 30% were between 21 and 35, 15% were between 36 and 60, and 5% were over 60.

The decision to use non-probabilistic sampling was justified by the proposed objective, which did not statistically generalise the results, but rather achieving a deep and contextualised understanding of circular and regenerative tourism in the rural context of the province of Manabí. Specifically, intentional sampling was the most convenient way to guarantee access to people with specific knowledge and experience, as this was difficult to achieve with random access. In addition, the research required the criteria of experts, leaders or qualified informants who had knowledge of endogenous resources, governance, and the circular and regenerative business model and this was very difficult to achieve through random sampling. In rural environments, the key population was often dispersed; non-probabilistic sampling facilitated access through established contact networks and social organisations.

The inclusion criteria were accessibility to data, specialists, and people involved in sustainable rural tourism development projects and initiatives, and all those who voluntarily expressed their willingness to collaborate with the research.

Exclusion criteria included not taking into account personal data that compromised ethical principles, as well as excluding from the sample individuals who did not voluntarily offer to participate in the research, and activities and considerations not associated with regenerative circular tourism linked to the principles of sustainability in the rural context.

Both the Likert scale questionnaire for the surveys and the interview guide were validated by ten academic professionals who were experts in research methodology. They provided criteria regarding the validity and

reliability of both instruments. The result obtained from applying the Likert scale to a pilot sample of 20 subjects in order to test the reliability of the designed instrument yielded a Cronbach's alpha coefficient of 0.86, which demonstrates good reliability:

$$\alpha = \left(\frac{k}{(k-1)}\right)\left(1 - \left(\frac{\sum {S_i}^2}{{S_t}^2}\right)\right)$$

where:

α: Cronbach's alpha

k: the number of items on the scale

S_i^2: the variance of each individual item

S_t^2: the variance of the sum of all item scores

The structured survey questionnaire was developed, taking into account the requirements of informant anonymity, voluntary participation, and ethical commitment in processing the information.

Taking advantage of new information and communication technologies, the survey questionnaire was sent electronically to the informants selected in the sample. Content validity was established through the judgement of experts with sufficient knowledge of sustainable tourism, circularity, regenerative tourism, and social responsibility.

Construct validity was assessed through qualitative analysis, which verified that the survey items coherently grouped the theoretical dimensions and criterion validity, comparing the results with other indicators proposed by authors cited in the theoretical framework of the research and by instruments applied in studies that served as background for the research.

The 15 statements (items) of the Likert scale submitted for consideration by the 250 volunteers selected for the sample were divided into three groups of five statements, each with a specific objective: the first (items 1 to 5) to establish the criteria of each of the groups of origin regarding the conceptualisation of rural circular tourism, regenerative tourism, and sustainability; the second group of statements (items 6 to 10) to establish notions about the relationships among circularity, tourism regeneration, and the basic principles of sustainability; and finally, a third group of statements (items 11 to 15) aimed at ascertaining the attitude of each group of respondents regarding the importance and contributions of tourism in their own sphere of activities.

The fifteen statements (items) included in the scale were as follows:

First group:

1. Circular rural tourism is a pathway to community development.
2. Circularity, regeneration, and sustainability have different specific meanings.
3. The development of circular and regenerative rural tourism does not require external financing or the creation of modern infrastructure.
4. Circular and regenerative rural tourism is based on the use of the own resources in the parishes and the regeneration of the damaged environment.
5. Circular and regenerative tourism makes it possible to sustain and develop the economy.

Second group:

6. The use and reuse of resources is a fundamental principle of circular tourism.
7. The restoration and improvement of ecosystems, conservation practices, and cultural preservation are characteristics of regenerative tourism.
8. Good governance and interaction between stakeholders are necessary for the development of circular and regenerative rural tourism at the community level.
9. One factor in the success of circular and regenerative rural tourism is that its benefits are felt by the entire community.
10. The development of circular and regenerative rural tourism requires adaptation to new ways of doing things.

Third group:

11. Circular tourism seeks to harness the full potential of renewable energy sources to protect the environment.
12. Innovation is necessary for the development of circular and regenerative rural tourism, which requires a new philosophy of action in tourism services.
13. Enterprises associated with rural and regenerative circular tourism contribute to raising the quality of life of the community.
14. The planning of rural and regenerative circular tourism contributes to correcting difficulties that arise in public policies and governance.
15. The economic benefits obtained from rural and regenerative circular tourism enterprises have been returned to the benefit of the entire parish.

A guide for interviews was developed regarding the following five aspects:

What is the meaning of regenerative circular tourism?

What is the importance of rural and regenerative circular tourism projects and ventures for community life and development?

What is the importance of defining who should participate in the processes to promote regenerative circular tourism in a rural community?

What is the relevance of the performance of parish authorities in the development of regenerative rural circular tourism?

What is the importance of the relationship among regenerative rural circular tourism, the standard of living, and the quality of life in rural parishes?

In addition, a semantic differential was applied to measure tourists' attitudes towards fundamental issues of circularity and regenerative tourism in the rural context, based on the paradigm of sustainability. It consisted of a set of three positions representing ratings under the following premise: Mark with an X on each indicator on circularity, regenerative tourism, and its relationship with sustainable development in rural communities. One of the four options you consider: strongly agree; agree; disagree; don't know.

The ten control aspects related to circularity, regenerative tourism, and their relationship with sustainable development in rural communities included in the instrument were as follows:

- First. Generates additional income for the community.
- Second. Generates employment for the community.
- Third. Generates social benefits for the community.
- Fourth. Promotes sustainable agriculture and environmental protection.
- Fifth. Contributes to improving the living conditions of the community.
- Sixth. Promotes the protection of soil, water, and biological diversity.
- Seventh. Encourages waste management and resource recycling.
- Eighth. Promotes efficient use and energy saving.
- Ninth. Encourages the use of renewable energy sources.
- Tenth. Promotes the use of endogenous resources of the territory.

Three tourists sites in each of the seven parishes of the sample were selected, except for Chirijos, where only two were surveyed. The sample of 20 selected tourists consisted of visitors who voluntarily agreed to participate, under the condition of anonymity.

3. Results

3.1 Results of the Likert Scale Applied to the Survey

Table 2 shows a summary of the results of the Likert scale for each group of items, and Figure 1 shows the behaviour of the arithmetic mean and the mean of the item scores.

Table 2. Results of the Likert scale for each item group

Items	Description	Respondents	MA	A	NS	D	MD	Points Awarded
1–5	Criteria relating to the conceptualisation of circular rural tourism, regenerative tourism, and sustainability.	250	173	49	10	13	6	1121
6–10	Notions on the relationships among circularity, tourism regeneration, and basic principles of sustainability.		162	61	11	11	5	1116
11–15	Knowledge about the importance and contributions of tourism in their own field of activity.		164	60	10	12	3	1120

3.2 Interpretation of the Results

To measure community perceptions of regenerative and circular tourism in rural areas, reliable and psychometrically valid tools were required. They had the capacity to appropriately reflect the conceptual complexity of the construct. Circular tourism is associated with innovation, collaborative governance, use of local resources, and environmental regeneration (Yang et al., 2022). Therefore, the validation of scales provides the empirical evidence needed to support sustainable territorial planning proposals. Within this framework, a 15-item Likert scale was used on 250 subjects to analyse its latent structure, establish its internal validity, and calculate its reliability, following the methodological guidelines with extensive adoption of applied psychometrics (DeVellis & Thorpe, 2021; Hair, 2021). The scale consisted of five ordinal categories (5 = Strongly agree; 1 = Strongly

disagree) appropriate for assessing perceptions and attitudes.

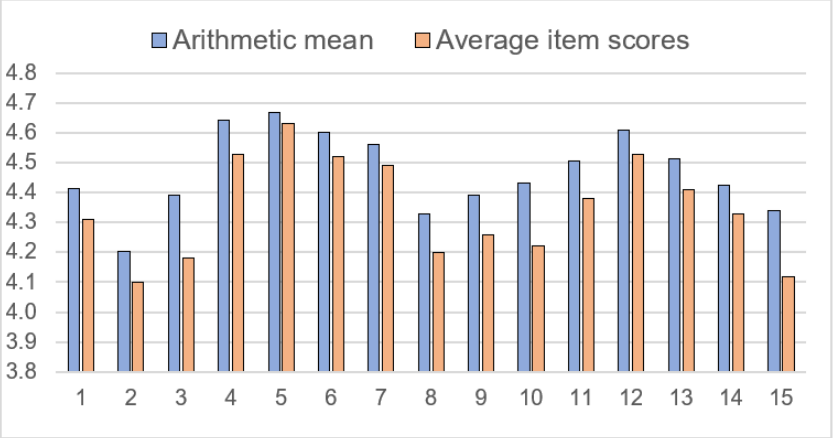

Figure 1. Behaviour of the arithmetic mean and the mean of the item scores

As the available data were shown as frequencies per item, the statistical test of exploratory reconstructive factor analysis was used. This method is appropriate when the information is aggregated and the objective is to calculate the dimensionality of the instrument (Ferrando & Lorenzo-Seva, 2017).

Before the exploratory factor analysis, three fundamental criteria were analysed: Low dispersion of central tendency; high consensus; and a scale with marked directionality. It was verified that the 15 items were ordinal polytomous, which implied that the underlying structure was analysed using a polychoric correlation matrix. There was a sample of 250 respondents that met the minimum criterion of subjects per item (Hair, 2021).

Given the type of data, extraction methods, rotation, and retention criteria, the KMO sample adequacy test were used. The results of the KMO test = 0.93 could be interpreted as excellent, thus confirming that the correlations between items were adequate for factor analysis. Bartlett's sphericity test $\chi^2(105) = 1543.22$, $p < 0.001$, indicated that the correlations between items were not zero. The factorial structure obtained demonstrated the existence of a strong factor. With the unidimensional scale (regenerative rural circular tourism), both results validated the relevance of exploratory factor analysis.

As general results, it can be seen that the individual means ranged from 4.20 to 4.67, demonstrating considerable acceptance of circular and regenerative tourism in the rural context, as well as significant directional consistency. This uniformity indicated that there was a common latent dimension.

The first factor had an eigenvalue of 10.87 and an explained variance of 72.4%, which was exceptionally high for social sciences, thus confirming that the items reflected a single conceptual dimension. Factors 2 and 3 had eigenvalues <1, so they were not retained. The estimation of the factor loadings demonstrated excellent criteria, with all loadings above 0.7. The analysis of the scale revealed a robust latent factor related to the positive and well-founded perception of the rural and regenerative circular tourism strategy as a means for sustainable development at the community level.

In summary, it can be noted that the scale had a valid and robust structure, a high degree of internal consistency, and significantly explanatory power, according to the results obtained. The detected uni-dimensionality indicated that respondents viewed circular and regenerative tourism as a cohesive construct, in which components such as sustainability, innovation, governance, use of local resources, and environmental regeneration were organically incorporated.

The positive adoption of the circular paradigm was reflected in the high average of all items. This coincides with studies indicating that rural communities appreciate actions that strengthen the local economy and socio-ecological resilience (Yang et al., 2022).

The results of the exploratory factor analysis confirmed that the scale was uni-dimensional and had only one factor that accounted for 72.4% of the variance. The factor loadings were high (≥0.72) and indicated robust conceptual consistency among the items. Participants shared a positive opinion about rural and regenerative circular tourism as a sustainable development strategy for the community. The instrument is appropriate for use as a diagnostic basis in territorial development projects and for future research.

3.3 Interview Results

Table 3 shows a summary of the significance of the responses given by the 35 interviewees in terms of: Very important (VI), relevant (R), and irrelevant (I), according to their levels of origin including parish authority (PA), tourism entrepreneur (TE), and community resident (CR).

Table 3. Results of interviews with authorities, managers, and residents

Item	Subject to be Monitored	Parish Authority (AP)				Tourism Entrepreneur (ET)				Neighbour in the Community (VC)				Total Summary			
		(MI)	(R)	(I)	Sub Total	(MI)	(R)	(I)	Sub Total	(MI)	(R)	(I)	Sub Total	(MI)	(R)	(I)	Total
1	On the meaning of regenerative circular tourism.	5	2	0		6	7	1		10	3	1		21	12	2	
2	Importance of rural and regenerative circular tourism projects and ventures for community life and development.	2	5	0		1	13	0		5	6	3		8	24	3	
3	Importance of defining who should participate in the processes to promote regenerative circular tourism in a rural community.	1	6	0		4	10	0		8	5	1		13	21	1	
					7				14				14				35
4	Relevance of the performance of parish authorities in the development of regenerative rural circular tourism.	3	4	0		5	9	0		5	7	2		13	20	2	
5	Importance of the relationship among regenerative rural circular tourism, the standard of living, and quality of life in rural parishes.	3	4	0		6	8	0		5	8	1		14	20	1	

3.4 Interpretation of the Interview Results

To understand the dynamics of governance, social appropriation and implementation of circular and regenerative rural tourism, it is essential to analyse the perceptions expressed by key actors (PA, ET, and VC). The responses obtained through the structured survey could be used to compare whether assessments of the relevance of regenerative tourism and its consequences for the community coincided or varied, depending on the social roles played by the participants.

As the interview responses were classified into three degrees of relevance (very important, important, and relevant) and grouped according to the types of stakeholders, the most appropriate statistical approach was within the context of independence tests for categorical variables, particularly the chi-square (χ^2) test (Agresti, 2018; Field, 2017).

Table 3 presents the data that are manifested as categorical qualitative variables (ordinal, although treated as nominal for the purposes of χ^2). The χ^2 test was applied to each item separately to determine whether the distribution of responses (MI, R, and I) was dependent on the types of actors (AP, ET, and VC). The test was appropriate when the variables were categorical, the groups were independent, and contingency frequency tables were available (Agresti, 2018; Field, 2017). Parametric tests (Student's *t*, ANOVA, regression, and correlations) and factorial analysis were not applied because there were no continuous scores and the data were not individual; only the count by category was available.

Within the decision parameters, the significance level was $\alpha = 0.05$. The degree of freedom per item: $df = (r - 1)\,(c - 1) = (3 - 1)\,(3 - 1) = 4df = (r - 1)\,(c - 1) = (3 - 1)\,(3 - 1) = 4df = (r - 1)\,(c - 1) = (3 - 1)\,(3 - 1) = 4$. The

critical value of χ^2 for $gl = 4$ and $\alpha = 0.05$: $\chi^2\_\{critical\} = 9.488$. The criterion was that when $\chi^2\_\{calculated\} \leq 9.488 \rightarrow$ There was no significant difference.

For discussion purposes, from an inductive point of view, it is possible to determine a trend towards a high degree of inter-theoretical agreement in four of the five elements studied. The three groups (AP, ET, and VC) have similar views on regenerative circular tourism, the importance of establishing who is involved in the processes, the relevance of the actions of parish authorities, and the connection between regenerative tourism and quality of life. This agreement implies that there is a shared understanding of the role of circular tourism in the local development, which represents a favourable basis for collaborative governance.

The most notable difference is found in item 2. The only statistically significant discrepancy is in the assessment of how important circular and regenerative tourism projects and ventures are for the life and progress of the community. This finding can be understood as a manifestation of the diverse perspectives that stakeholders have regarding the advantages and dangers of the ventures. While most tourism entrepreneurs tend to focus on economic profitability and commercial opportunities, neighbours may place more importance on the effects on the environment and society. Parish authorities may adopt a more normative and institutional logic. This finding is consistent with research showing that impressions of tourism and related projects vary, depending on the roles of participants in the local socioeconomic structure (Field, 2017).

The relevance of the χ^2 test compared to other options was that the selection of the test was fully justified by the design, which had three independent groups. The data were presented in the form of categorical frequencies, and the purpose was to contrast the distribution of responses among actors. Other assessments, such as correlations, factor analysis, ANOVA, and Student's *t*-test, would be incorrect from a methodological point of view because they required continuous scores or individual data matrices (Hair, 2021). In this regard, the statistical strategy adopted was not only relevant, but also the only viable and scientifically sustainable one for the existing data set.

In conclusion, it can be argued that the χ^2 test was the appropriate and feasible statistical technique, given the categorical nature of the data and the structure of independent groups. In four of the five items analysed, no significant differences were found among parish authorities, tourism entrepreneurs, and community residents. This showed a high level of inter-actor consensus on the main aspects of rural and regenerative circular tourism. Item 2 showed significant differences, indicating that the assessment of circular tourism projects and ventures as a tool for community life and development varied according to the types of actors, thus revealing a critical point for the design of policies and strategies for coordination between actors. The set of results suggested that, despite small differences in the perception of the ventures, there was a shared conceptual framework regarding the role of regenerative tourism in the quality of life and local development, which constituted a solid basis for the construction of collaborative governance models in rural parishes.

3.5 Results of the Semantic Differential Applied to Tourists

Of the 20 surveyed tourists who were given the semantic differential test, 40% were male and 60% were female. 85% were domestic tourists and 15% were international tourists from Colombia, Peru, and Spain. Thirty per cent had completed higher education, 50% had completed secondary education, and 20% had completed primary education. In terms of age, 40% were under 20, 40% were between 21 and 35, 15% were between 36 and 60, and 5% were over 60. Table 4 shows the results of applying the semantic differential to tourists.

Table 4. Results of the semantic differential applied to tourists

Items	Criteria to be Monitored	Tourists Surveyed	Completely Agree	Agree	Disagree	Unknown
1	Generates additional income for the community.	20	17	1	0	2
2	Creates employment opportunities for the community.		15	2	1	2
3	Generates social benefits for the community.		17	1	1	1
4	Promotes sustainable agriculture and environmental protection.		15	2	2	1
5	Contributes to improving the community's living conditions.		17	1	1	1
6	Promotes the protection of soil, water, and biological diversity.		16	1	2	1
7	Encourages waste management and resource recycling.		14	3	1	2
8	Promotes efficient energy use and energy saving.		16	2	1	1
9	Encourages the use of renewable energy sources.		16	2	1	1
10	Promotes the use of endogenous resources from the territory.		15	1	2	2

3.6 Interpretation of the Semantic Differential Results

To determine the level of social acceptance of this model and its capacity to become a sustainable strategy in rural areas, it is essential to examine visitors' perceptions of regenerative and rural circular tourism. Specifically, the assessment of economic, social, environmental, and energy benefits could determine whether visitors appreciated the contribution that this type of tourism made to the local community and the environment.

On this occasion, four types of responses were designed as semantic differentials applied to tourists: Strongly agree; agree; disagree and don't know. These terms were used to assess the level of agreement with statements about the economic, social, and ecological effects of circular tourism.

The statistical approach was based on non-parametric tests for categorical variables, as the data were expressed as absolute frequencies per category. For the analysis, the χ^2 goodness of fit test was the most appropriate instrument (Agresti, 2018; Field, 2017).

The data were obtained from a questionnaire administered to 20 tourists, who answered 10 items with the four categories of responses indicated above. Each item was linked to a particular criterion related to regenerative and circular rural tourism. The statistical problem was not to compare groups, but to determine whether the distribution of responses among the four categories for each item was uniform, because all alternatives were chosen equally or focused significantly on one or more categories such as 'Strongly agree'. Therefore, the most appropriate test was χ^2 goodness of fit, which allowed comparison between the observed frequency distribution and a theoretical reference distribution (Agresti, 2018; Field, 2017).

For each item, a null hypothesis (H_0) was proposed when the responses were distributed uniformly among the four categories, i.e., there was no preference for any one category. In addition, there was an alternative hypothesis (H_1) where the responses were not distributed uniformly and there was a significant preference.

The findings revealed a strong and consistent trend in that most tourists fell into the 'Strongly agree' category for all ten items, with few responses in the 'Don't know' or 'Disagree' categories. This was not a random effect, but a strong trend that was statistically confirmed by the statistical test applied.

From an inductive and reflective point of view, it indicated that tourists clearly identified the economic advantages of regenerative circular tourism in terms of job creation and local income (items 1 and 2). This coincides with what has been stated in the literature, which associates sustainable tourism with possibilities for economic diversification in rural environments (Hair, 2021). On the other hand, great importance is attached to the benefits for society and the improvement of the living conditions of the community (items 3 and 5), which suggests that they see tourism not only as an economic activity, but also as an instrument for unifying society and improving community well-being. At the same time, they accurately recognised the connection between circular tourism and environmental sustainability, especially with regard to waste management, recycling, efficient energy use, the promotion of renewable sources, and the protection of water, soil, and biodiversity (items 4, 6, 7, 8, and 9). This vision is in line with current approaches that incorporate ecological regeneration and the circular economy into the design of tourism products (Field, 2017). The use of endogenous resources from the territory was also valued (item 10), which showed an appreciation for the local and authentic identity of circular rural tourism. This is consistent with proposals for territorially rooted and endogenous development (Agresti, 2018).

It can be stated that, from a methodological point of view, the selection of the χ^2 goodness of fit test was completely valid because the data were categorical in nature and parametric tests could not be applied. There was no comparison between groups, so it was not appropriate to use the Chi-square test of independence. No individual-level information was available for factorial or correlational analysis.

Therefore, the statistical strategy employed was the only one that was viable and could be defended from a scientific point of view for this data set. This methodology firmly demonstrated that tourists did not have a neutral or random perception, but were markedly biased towards a positive view of regenerative and circular tourism in rural areas.

In conclusion, it can be said that in the ten variables studied, the χ^2 values considerably exceeded the critical value, suggesting that the distribution of responses was not equitable and that there was a statistically significant preference for the 'Strongly agree' category. Visitors considered rural, circular, and regenerative tourism to be an activity that creates jobs and income, provides social benefits, improves quality of life, and promotes environmental sustainability and the use of local resources. Therefore, the model was viewed very positively. The evidence supports the notion that regenerative circular tourism is highly accepted among tourists, providing a favourable basis for creating and implementing projects that integrate environmental protection, social cohesion, and economic development in rural communities.

From a methodological point of view, the case demonstrated that it was possible to carry out a sound and scientifically rigorous statistical analysis, even when only aggregate data was available, provided that the appropriate test for the nature of the available data was chosen.

4. Discussion

The research focused on re-evaluating the principles of regenerative and circular tourism as fundamental tools

for resilience and sustainability in rural parishes in Manabí, Ecuador. The examination of the empirical data, together with a systematic review of the literature, confirmed the central hypothesis while identifying significant gaps between the theoretical knowledge of stakeholders and its practical application, particularly with regard to the reinvestment of profits and governance.

The results of the survey of community actors indicated complete agreement that circular rural tourism was an essential means for community development, with an overall score of 1,103 points, and contributed directly to the maintenance and progress of the economy, with 1,167 points. Tourists clearly noted that this modality generated extra income and improved the living conditions of the community. The results of the semantic differential applied to tourists corroborated this perception and revealed a relative agreement of criteria and little variation between one group and another in relation to the controlled questions. This demonstrated that the international experiences reflected in the theoretical framework had a positive impact on the practice of tourism in Manabí in relation to circularity and regenerative tourism in the rural context. The sustainability of the sector could then be ensured, especially the experiences of Latin American countries (Agag et al., 2020; Aznar & Ciro, 2023).

The thesis of Singgalen et al. (2019) argued that the essence of circular rural tourism consisted of merging economic progress with an improvement in the quality of life and community environmental sustainability, which was confirmed by this empirical coincidence between tourists who expressed demand and local actors who made supply possible. The results indicated that the added value of tourism in Manabí did not originate from modern infrastructure, but rather from the revaluation of endogenous resources and heritage, as analysed in Item 4, which scored 1,161 points, for example, through the exploitation of natural charms and traditional gastronomy. This coincides with the premises of Bodnár (2013) and Trukhachev (2015).

The findings broadened the debate by showing that, in Manabí, the model was seen as a factor of resilience that had the capacity to function without the need for high external financing, as discussed in Item 3, a characteristic that contrasted with much of the literature on circularity in tourist destinations (Fusco Girard & Nocca, 2019; Hall & Page, 2014; Izquierdo-Gascón & Rubio-Gil, 2022; Mejía Ochoa et al., 2024). This justified the need for methodological frameworks adapted to rural subsistence economies (Kumar et al., 2025), as postulated in the introduction to the manuscript.

Community actors demonstrated a clear understanding and acceptance of the operational principles of circularity and regeneration. Resource efficiency in use and reuse was validated as a fundamental principle with a score of 1.151 points, which is in line with Bux & Amicarelli (2023), Lavtizar et al. (2021), and Pamfilie et al. (2018). Environmental regeneration through ecosystem restoration and improvement and cultural conservation practices were recognised as essential characteristics of regenerative tourism with a score of 1,140 points. There was a high awareness of the need to harness the potential of renewable energy sources with 1,127 points and a decarbonisation measure supported by Lyle (1996), Martínez & Porcelli (2018), and Souza et al. (2020).

The semantic differential corroborates this alignment, as tourists agreed that the model actively promoted the protection of soil, water, and biodiversity, as well as efficient use of energy. This strong validation stems from the fact that both groups indicate that the theoretical principles of circularity and regeneration, being attractive to the market, have already permeated the discourse and the strategic vision of local actors (Day et al., 2021; Dhakad, 2025; Martínez & Porcelli, 2018; Souza et al., 2020).

The effective application of governance linked to policies of sustainable tourism favoured the integration of the efforts of all stakeholders to promote circularity and regenerative tourism in rural contexts through the appropriate use of new technologies, which enabled the exploitation of local capacities, the expansion of employment opportunities, and the redistribution of wealth (Kabil et al., 2024; Martínez & Porcelli, 2018; Mihai, 2023; Valderrama & Polanco, 2022). Despite the widespread conceptual acceptance of circular principles, findings showed that discrepancies in the perception of benefit distribution and governance were the main obstacles to the consolidation of the model (Del Pilar et al., 2016).

Regarding the need and practice of reinvestment, actors in the tourism sector acknowledged that the success of tourism depended on its benefits being distributed throughout the community, with a score of 1.098 points. Agreement on whether “economic benefits have been used again for the well-being of the entire parish”, as discussed in Item 15, scored 1,085 points, representing a slight decrease and a wider dispersion in responses. This gap between the claim of equity and actual perception highlighted the problem of implementing inclusive governance in practice, in line with the analysis by Fusco Girard & Nocca (2019), Hall & Page (2014), Izquierdo-Gascón & Rubio-Gil (2022), and Mejía Ochoa et al. (2024). This was a situation that could affect collaboration and community resilience if the problem was not understood by the social capital that formed the basis of this relationship. The continuity of the circular model was at risk, in line with the analysis by Hall & Page (2014).

Interviews with tourism stakeholders reinforced the critical relevance of governance, as interventions focused on the importance of determining the performance of parish authorities in development, as addressed in items 3 and 4 (Kabil et al., 2024; Martínez & Porcelli, 2018; Mihai, 2023; Valderrama & Polanco, 2022). This indicated that the management and articulation of the circular model was a greater focus of concern than the viability of natural resources itself (Bodnár, 2013; Paresishvili et al., 2017; Royo-Vela, 2009; Trukhachev, 2015).

The findings revealed a conceptual fragmentation that supported one of the gaps detected in the introduction to

the study on the confusion of concepts. Although 65.2% of the respondents disagreed or strongly disagreed with the statement “Circularity, regeneration, and sustainability have different specific meanings”, the qualitative study of the interviews revealed a high percentage of misinterpretation regarding the understanding of the meaning of regenerative circular tourism. This contrast indicated that, although there was a general awareness that the concepts were different and complementary, the technical and methodological knowledge required to distinguish the implementation of a circular principle from a regenerative one was lacking. This confirms that, as proposed by Day et al. (2021), innovation should not only be technological, but also philosophical and methodological.

In summary, the research empirically demonstrated that the theoretical and methodological components of circular and regenerative tourism were relevant as tools for sustainability and resilience in the rural parishes of Manabí. The findings demonstrated that circular rural tourism was a feasible and desirable model, with a consensus between the community and visitors. This approach represented the path to provincial socio-economic progress based on the use of endogenous resources and environmental regeneration. It was perceived as a crucial route to raising the quality of life in rural parishes.

The study confirmed that equity in the reinvestment of profits and the strengthening of inclusive governance were the determining factors for success. There was a discrepancy between what the community expected and what actually happened in terms of profit distribution. This required the application of methodologies that strengthened social capital and coordination between parish authorities and tourism entrepreneurs.

With regard to the methodological and conceptual gaps, the presence of fragmentation in technical knowledge for implementing regenerative and circular principles could be examined. This legitimised the requirement for an integrated methodological framework that converted the abstract vision into feasible and quantifiable management tools, thus enabling adaptation to the new modes of action needed in the Manabí tourism sector and fostering innovation.

5. Conclusions

The research confirmed that regenerative and circular tourism was an effective means of sustainable development in rural areas, based on the principles of social responsibility in tourism. Tourism stakeholders, authorities, entrepreneurs, and residents agreed that the model was valuable for creating jobs and income, improving the quality of life of the host community, and protecting and restoring the ecosystem.

Despite the high level of consensus shown in the results, there are still gaps in knowledge about the specific theoretical and methodological foundations of circularity and regeneration in rural areas, causing the lack of previous comprehensive research and problems with current education and training models.

The findings indicated that, although the value of fair distribution and governance was accepted, there was less agreement on the perception of the effective return of benefits to the community. This highlighted that the implementation of social equity remained an important challenge in the context of rural tourism.

In order to address the disparities identified and built on the existing consensus, the following strategic recommendations were suggested for tourism stakeholders, authorities, communities, and entrepreneurs:

Explicit and cross-cutting incorporation of regenerative and circular tourism into the Provincial Development and Land Use Plan and municipal gender and development (GADs). In this context, establish a regenerative development axis in rural parishes, with defined metrics for waste management and energy efficiency in tourism businesses.

Work to establish lines of tax incentives and seed funds that are tailored to the economies of rural destinations. To this end, promote the creation of a local revolving fund to co-finance circular infrastructure projects with initiatives related to the manufacture of biodigesters, the use of renewable energies, and water collection systems that demonstrate a quantifiable regenerative impact.

Legitimise and formalise community involvement in the decision-making process. Establish roundtables on regenerative circular tourism that have advisory power and co-management capacity, to ensure that women and young people are represented in equal proportions.

Build capacity for active and continuous training on the topic of regenerative circular tourism, including certification of community members in organic waste management, energy efficiency, and marketing of regenerative experiences.

Make the distribution of profits transparent for the benefits of the community and actively participate in the design of projects that aim to use a constant percentage of tourism income to improve social infrastructure through a community-managed fund.

Encourage the use of traditional knowledge as a basis for regenerative practices. Promote rural ethno-tourism focused on agroecology, bio-construction, and ancestral medicine, in order to give a new value to local crafts and endogenous resources.

Future research could extend the results of the current study to more rural parishes on the coast and in the Ecuadorian province. The aim is to validate and scale up the results; increasing the sample size and allowing replication would enable the expansion of knowledge. Simultaneously, work to deepen governance through

longitudinal studies could focus on the evaluation and performance of regenerative circular tourism roundtables, in order to assess their effectiveness in distributing wealth fairly.

Author Contributions

Conceptualization, M.A.B.G. and N.P.E.; methodology, N.P.E.; software, M.A.B.G. and N.P.E.; validation, N.P.E.; formal analysis, N.P.E.; investigation, M.A.B.G. and N.P.E.; resources, M.A.B.G.; data curation, N.P.E.; writing—original draft preparation, M.A.B.G. and N.P.E.; writing—review and editing, M.A.B.G. and N.P.E.; visualization, M.A.B.G. and N.P.E.; supervision, N.P.E.; project administration, M.A.B.G. and N.P.E. All authors have read and agreed to the published version of the manuscript.

Data Availability

The data used to support the research findings are available from the corresponding author upon request.

Acknowledgements

We acknowledged the technical and academic support provided by the University Collaboration Department of the Technical University of Manabí, as well as the Prefecture of the province of Manabí for facilitating access to relevant information on territorial development plans.

Conflicts of Interest

The authors declare no conflict of interest.

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Nomenclature

α	Cronbach's alpha
k	the number of items on the scale
S_i^2	the variance of each individual item
S_t^2	the variance of the sum of all item scores