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Methodological-touristic proposal to highlight forest production links in Pinar del Río, Cuba

Propuesta metodológico-turística para resaltar eslabones de producción forestal en Pinar del Río, Cuba

Proposta metodológica-turística para destacar as ligações de produção florestal em Pinar del Río, Cuba

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ABSTRACT

The province of Pinar del Río has very attractive landscapes, where forests play an important role in ecosystem services of scenic beauty and others. The forestry sector is in charge of their establishment, maintenance and conservation, whether they are plantations or natural forests. The fact of promoting in these sites of tourist interest, with the presence of forests in their landscapes, particularities of forest production and the actions of agroforestry enterprises, is an interesting potential for attraction and enjoyment. The scientific problem derived was, how to contribute to the national and international promotion of the most significant sites of forest production in Pinar del Río? The objective of this research consisted in proposing methodological elements for the design of a tourist route, which highlights the sites of interest with links to forestry production in Pinar del Río. To this end, a diagnosis was made in search of preferential sites, taking into account whether they were plantations or natural forests of different formations and management categories, logistically organizing how the route should be organized, taking into account different links of forest production (nurseries, different



types of forests, harvesting, sawmills, among others); the regulations in force for this purpose were also considered, with a geographic information system with the possibility of information and updating. The preferred sites were Macurijes, La Palma, Minas de Matahambre and Guanahacabibes. According to the respondents, Macurijes was the most representative in terms of elements of the forest production chain and landscape attributes.

Keywords: Forest production chain; Tourist route; Scenic beauty.

RESUMEN

La provincia de Pinar del Río posee paisajes muy atractivos, donde los bosques juegan un papel importante en servicios ecosistémicos de belleza escénica y otros. El sector forestal es el encargado de su establecimiento, mantenimiento y conservación, ya sean plantaciones o bosques naturales. El hecho de promocionar en esos sitios de interés turístico, con presencia de bosques en sus paisajes particularidades de la producción forestal y el accionar de las empresas agroforestales, resulta un interesante potencial de atracción y disfrute. El problema científico derivado fue, ¿cómo contribuir a la promoción nacional e internacional de los sitios más significativos de la producción forestal en Pinar del Río? El objetivo de esta investigación consistió en proponer elementos metodológicos para el diseño de una ruta turística, que destaque los sitios de interés con eslabones de la producción forestal en Pinar del Río. Para ello, se realizó un diagnóstico en busca de los sitios preferenciales, se tuvo en cuenta si se trataba de plantaciones o bosques naturales de diferentes formaciones y categorías de manejo, organizando logísticamente cómo debe encausarse la ruta, teniendo en cuenta diferentes eslabones de la producción forestal (viveros, diferentes tipos de bosques, aprovechamiento, aserríos entre otros); se contempló además las normativas vigentes para este fin, con un sistema de información geográfica con posibilidades de información y actualización. Los sitios preferenciales fueron Macurijes, La Palma, Minas de Matahambre y Guanahacabibes. Resultó el más representativo en cuanto a elementos de la cadena productiva forestal y atributos de paisaje, según los encuestados, Macurijes.

Palabras clave: Cadena productiva forestal; Ruta turística; Belleza escénica.

RESUMO

A província de Pinar del Río tem paisagens muito atrativas, onde as florestas desempenham um papel importante nos serviços ecossistêmicos de beleza paisagística e outros. O sector florestal é responsável pelo seu estabelecimento, manutenção e conservação, quer se trate de plantações ou de florestas naturais. O fato de promover nestes locais de interesse turístico, com a presença de florestas nas suas paisagens, as particularidades da produção florestal e as ações das empresas agroflorestais, é um potencial interessante de atração e desfrute. O problema científico derivado foi, como contribuir para a promoção nacional e internacional dos sítios de produção florestal mais significativos de Pinar del Rio? O objetivo desta investigação consistiu em propor elementos metodológicos para a concepção de uma rota turística que pusesse em evidência os sítios de interesse com ligações à produção florestal em Pinar del Rio. Para tal, foi feito um diagnóstico em busca de locais preferenciais, tendo em conta se eram plantações ou florestas naturais de diferentes formações e categorias de gestão, organizando logísticamente a forma como o percurso deveria ser canalizado, tendo em conta as diferentes ligações da produção florestal (viveiros, diferentes tipos de florestas, colheita, serrações, entre outras); foram também considerados os regulamentos em



vigor para este fim, com um sistema de informação geográfica com possibilidade de informação e atualização. Os locais preferidos foram Macurijes, La Palma, Minas de Matahambre e Guanahacabibes. Segundo os inquiridos, Macurijes era o mais representativo em termos de elementos da cadeia de produção florestal e atributos paisagísticos.

Palavras chave: Cadeia de produção florestal; Rota turística; Beleza cénica.

INTRODUCTION

For a long time in the tourism market, the demand was marked by massive packages linked fundamentally to the so-called sun and beach tourism. Since the end of the last century, a new trend of diversification of the tourism activity has been unleashed in response to changes in the motivations and interests of the demand (Baños, 1998). At the same time, traditional markets have introduced socioeconomic improvements that have contributed to these changes in tourist behavior and motivation, as well as an increase in the complexity of their requirements (Andreu and Verdú, 2012).

One of the varieties that has contributed most to bringing the supply of tourism products closer to the needs of customers has been to promote the development of destinations through the design of tourist routes of various kinds, which integrate the existing attractions in a given area or region, whether its natural geography, landscape, historical and cultural values, economic activities, lifestyles, among other aspects, forming a product with high added value for tourists and economic and social value for all the actors involved in it.

The main objective of nature tourism trips, also known as nature tourism, is to carry out recreational activities in contact with nature and the communities that live in the surrounding areas (PROCOLOMBIA, 2020).

In addition to offering the possibility of being in contact with nature, nature tourism enriches the experience of any traveler by promoting the care of flora and fauna and fostering a greater appreciation of natural tourist attractions (PROCOLOMBIA, 2020).

Agro-tourism constitutes one of the singularities of rural tourism, which offers the possibility of showing the development of agro-industrial activities typical of a certain region, zone or community that in some way is required by a tourism that today is more specialized, segmented, with a notable environmental culture. This tourism is closely linked to nature tourism, and if there is a difference between the two, it would be that the former is more related to the exploitation of some productive activity, while the latter is more directed to the enjoyment of the beauty of the landscape, its flora, fauna, culture, history and traditions of the place (Blanco and Riveros, 2011).

The uniqueness lies in the fact that as new areas are incorporated into tourism development, it becomes necessary to find and develop new products. Destinations that limit themselves to imitating existing attractions will offer nothing new to tourists. Through the inventory of resources, multiple opportunities can be identified, but it is necessary to choose a mix of products that offer new experiences to the consumer. This process is not easy; however, novelty is what attracts tourists to a destination (Ochoa, Conde and Hinojosa, 2012).



According to the Mexican Ministry of Tourism, nature tourism is travel that involves recreational activities in direct contact with nature and the cultural expressions that surround it, with an attitude and commitment to know, respect, enjoy and participate in the conservation of natural and cultural resources.

On the other hand, Agrotourism is a type of rural tourism in which an important component of the tourist offer is the reception, gastronomy, leisure, participation of tasks, in the agricultural exploitation. By its nature, it is an activity based on agriculture (Sayadi and Calatrava, 2001).

Agro-tourism offers tourists the possibility of getting to know and directly experience aspects of the local culture and learn about traditional practices of crops, harvests, processing of agricultural, forestry and fishing products, and handicrafts. Therefore, agro-ecological routes have a direct link with nature and their uniqueness lies in the fact that the tourist enters into the knowledge of the ways of doing a type of production in a community, in the way of life of the producer and his family (Blanco and Riveros, 2011).

Continuing with two examples in Ecuador, Lalangui (2015), designed an agroecological tourism route in El Guabo Canton, following PLANDELTUR methodology for such purposes, offering variants mounted on Geographic Information Systems (GIS).

Urquiola *et al.*, (2016) designed a nature tourism route that covered three Ecuadorian cantons, including visits to important banana production farms, highlighting the elements of the value chain of such production, which motivated tourists to.

This proliferation of tourism directly linked to nature makes it possible to use natural resources to boost local economies and improve the quality of life of its inhabitants, while generating the necessary capacities and synergies to create a product that covers a wide range of activities such as gastronomic services, communication, medical services, transportation, training, among others; at the same time it mobilizes the intelligence and knowledge of the community to meet and satisfy the most diverse demands posed by the tourist. Hence the emergence of the forestry tourism route as a form of agritourism, which highlights the values of forestry production and its productive chain linked to the landscape with the presence of forests.

According to Barbosa (2019) Cuba is characterized by a high level of endemic flora and fauna, by a great biodiversity at the level of the islands and the climate favors long walks through places already marked and delimited. In addition, linking scientific and academic tourism with nature tourism has been outlined as a goal to be achieved (Barbosa, 2019).

The forestry sector invests countless resources for the establishment, maintenance and conservation of forests as its heritage, however, this has been scarcely exploited in terms of productive chain, since generally, in tourism, forests have been seen as one more attraction of the landscape without entering into the essence of their formation, their characteristics and importance, the services they provide as part of an ecosystem, the goods they contribute, as well as their cultural values, among others.

Based on the scientific problem of how to contribute to the national and international promotion of the most significant sites of forestry production in Pinar del Río and, taking into account that the province has very attractive landscapes, which highlight particularities of forestry production that have not been treated from the point of view of tourism development, the objective of this research was to propose methodological



elements for the design of a tourist route that highlights the sites of interest with links to forestry production in Pinar del Río.

MATERIALS AND METHODS

Theoretical methods of documentary research and updated reviews on the subject were used. In addition to empirical methods in carrying out the diagnosis for the detection of significant sites in the province, by means of surveys and scientific observation during visits, and systemic logical methods in the proposal of methodological elements for the design of the route.

The Ministry of Tourism (MINTUR) in the province was used as the main source. The use of GIS tools was proposed for route design.

The survey was based on [Ritchie's \(2007\)](#) definition of the composition of a tourism product, with adaptations by the authors (Table 1).

Table 1. Composition of a tourism product

Atractivos	
Naturales	Montañas, planicies, costas; lagos; ríos y caídas de agua; grutas y cavernas; lugares de caza y pesca; bosques con lugares de observación de flora y fauna; caminos pintorescos, termas y parques nacionales. Elementos naturales de la cadena de la producción forestal.
Artificiales	Museos, obras de arte y técnica; lugares históricos, ruinas y lugares arqueológicos; manifestaciones religiosas y creencias populares, ferias y mercados, música y danza, artesanías y arte; comidas y bebidas típicas; explotaciones mineras, agropecuarias, forestal e industriales; centros científicos técnicos, artísticos y deportivos.
Humanos	Buen trato y atenciones; orgullo por la cultura y el pueblo; precios moderados, limpieza y buena presentación. Facilidades
Hospitalidad	
Alojamiento	Hoteles, hosterías, moteles, pensiones; campings; albergues, residencias, apartamentos turísticos, colonias vacacionales etc.
Alimentos y bebidas	Restaurantes estatales, privados, ranchones, en hoteles u hostales, otros.
Entretenimiento y diversión	y Clubes nocturnos, cines y teatros, parques de diversiones y deportivos.
Agencias de viaje	Detallistas y mayoristas
Arrendadoras de carros	de Incluye además todo el transporte turístico para city tours y excursiones.
Capacitación	A nivel básico, técnico, superior y posgrado.
Otros	Oficinas de información, servicios de guías y comercios turísticos; cambio de moneda; dotaciones para convenciones.
Accesibilidad	Marítimo: barcos, botes, incluye transporte lacustre. Terrestre: Ferrocarril, automóvil, autobús y otros.

Source: Own elaboration based on description by [Ritchie \(2007\)](#).

A simple random sampling was carried out for which 20 workers in the forestry and tourism sectors were selected for the application of the survey prepared and approved by MINTUR.



Site selection

Six sites were proposed: Macurijes, Viñales, La Palma, Minas de Matahambre, La Güira, Guanahacabibes. Diagnosis by survey. Respondents included Pinar del Río (forest patrimony of the agroforestry enterprise (EAF) of the province), leaving a total of seven. The aforementioned survey is included in the annexes.

Elements that were taken into account for the selection of sites:

- Agroforestry enterprise that serves them.
- Variety of landscapes with forest and/or plantations and their management by type.
- Particularities of the forest production chain present from the nursery, forest harvesting areas, sawmills, beekeeping, resin bank and processing, value-added establishments (furniture industry, handicrafts, honey marketing, medicine production, others).
- Trained personnel to guide the activity.
- Surrounding communities.

Methodological outline of the proposal

The following is the methodological scheme used in the preparation of the forest-tourist route to highlight the links of forest production while enjoying the landscape at each proposed site (Figure 1).



Figure 1. - Methodological scheme for the preparation of the FORTUR forest-tourism route



RESULTS AND DISCUSSION

Analysis of theoretical references and presentation to MINTUR

General information about tourist routes

A tourist route is the creation of a cluster of activities and attractions that encourage cooperation between different areas and serve as a vehicle to stimulate economic development through tourism (Briedehhann and Wickens, 2003).

According to Herbert (2001), the design of a tourist route should be based firstly on its construction, taking into account the available resources, and secondly, the conception of its marketing, considering the following phases:

- Establish the objective to be pursued with its creation.
- Specify which are the priorities to begin its design.
- To identify through studies the acceptance or not of the tourist demand on the product.

The author goes on to say that once it has been introduced in the market and based on its results, strategies for its implementation should be established, and finally, as travelers arrive on the route, the information received should be analyzed in order to adapt it to the needs of tourists (Herbert, 2001).

According to Fernández and Guzmán (2003), this process should consider several elements such as framing the itinerary from beginning to end with all the information that the tourist may require to make the journey without difficulty; this should include signage along the entire route that allows the tourist to know how the route is developed. Likewise, the itinerary must include a varied communication network that provides the tourist with the possibility of moving easily; finally, it must contain concrete elements that distinguish it from others, that represent a great attraction for the tourist.

Particularities of a specific production (forestry production).

Presentation of sites to MINTUR

The selected sites were presented to MINTUR and approved.

Statistical processing of the survey applied

- Elements of the forestry production chain taken into account, evaluated according to the surveys.

Nurseries and/or germplasm, natural forests, plantations, network road, sawmills, pole plants, honey, resin, charcoal, furniture industry and medicinal plants.

- Landscape and other attributes.

Scenic beauty, trails, biodiversity, endemism, rarities, archaeological elements, petrified caverns, murals, viewpoints, river, waterfall, waterfalls, beach or swimming pool,



nautical tours, surrounding communities, culinary, trade and crafts, popular culture, museum, tourism facilities.

Figures (2-8) are shown below, resulting from averaging the 20 respondents, both for the elements of the forest production chain and for the landscape attributes, for each of the sites considered in the study (Figure 2).

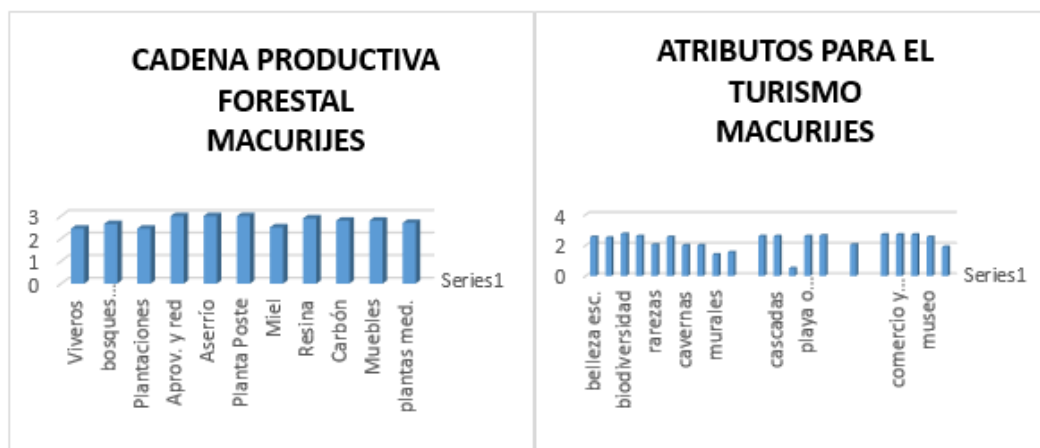


Figure 2. - Elements of the forestry production chain and landscape attributes in Macurijes

As can be seen, in this site there is a ratio between landscape tourism elements and possibilities for elements of the forest production chain (Figure 3).

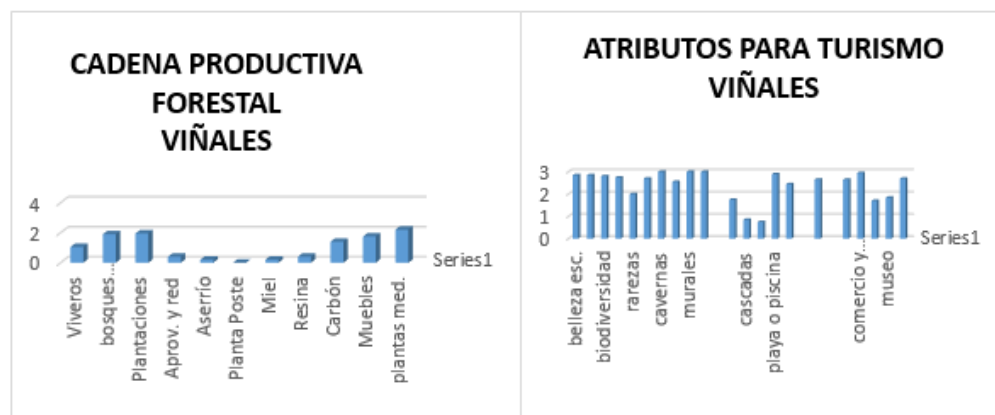


Figure 3. - Elements of the forestry production chain and landscape attributes in Viñales

In Viñales, landscape elements predominate, with relatively few productive forestry links.



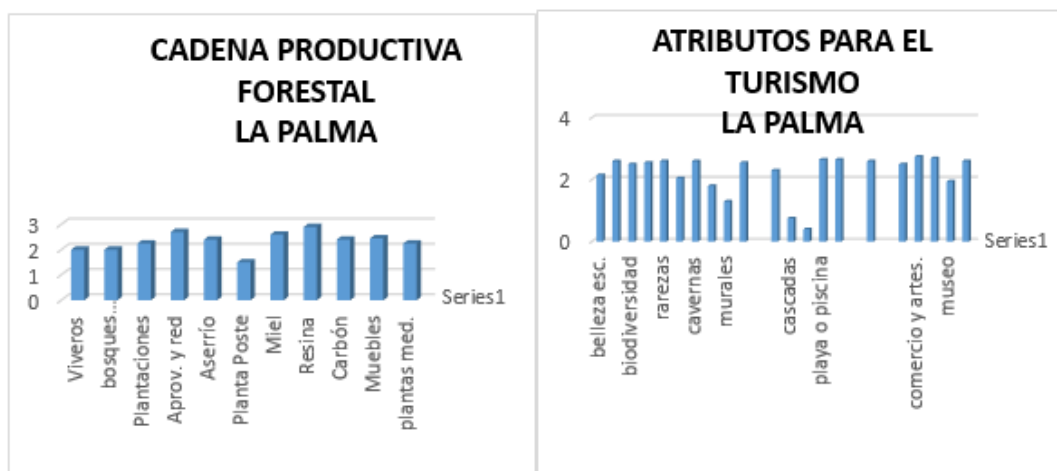


Figure 4. - Elements of the forest production chain and landscape attributes in La Palma

This is a site where, in comparison with Macurijes, there is also a proportion between both elements to be highlighted (Figure 4).

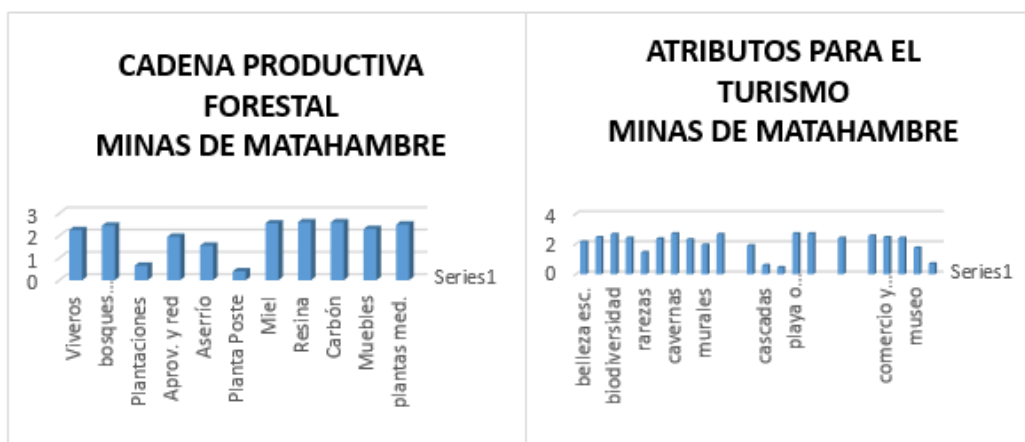


Figure 5. - Elements of the forest production chain and landscape attributes in Minas de Matahambre

Although it does not reach the proportions of Macurijes and La Palma, Minas could also be a preferable site to admire the landscape while enjoying elements of the forest production chain (Figure 5).



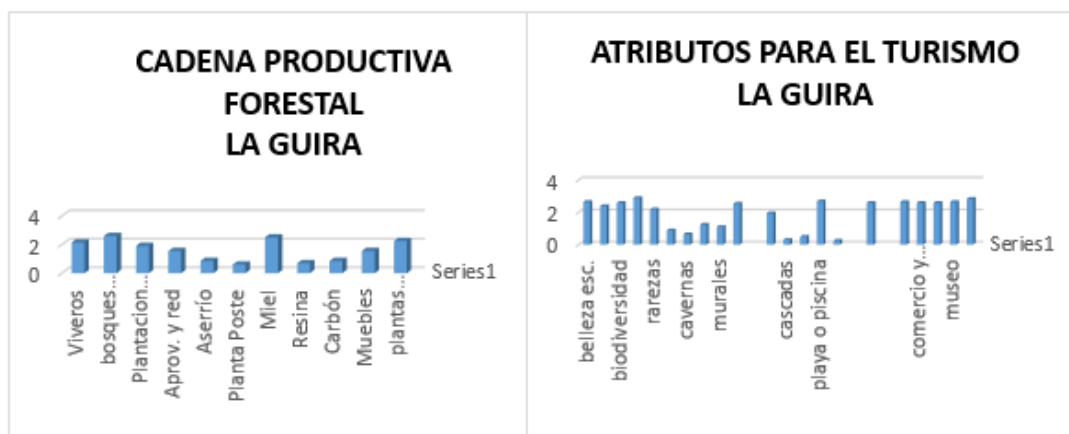


Figure 6. - Elements of the forest production chain and landscape attributes in La Güira

In La Güira, similar to Viñales, but to a lesser extent, tourism attributes predominate over forestry elements, although some are present (Figure 6).

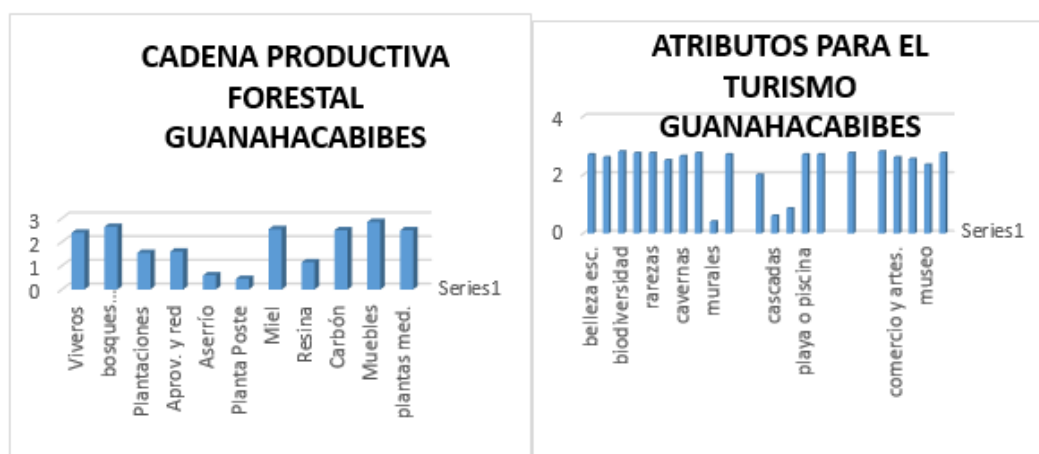


Figure 7. - Elements of the forest production chain and landscape attributes in Guanahacabibes

According to Figure 7, Guanahacabibes is an interesting site where both elements are combined, being superior in terms of landscape, due to its own characteristics, but with an adequate appreciation of the links in the forest production chain (Figure 7).



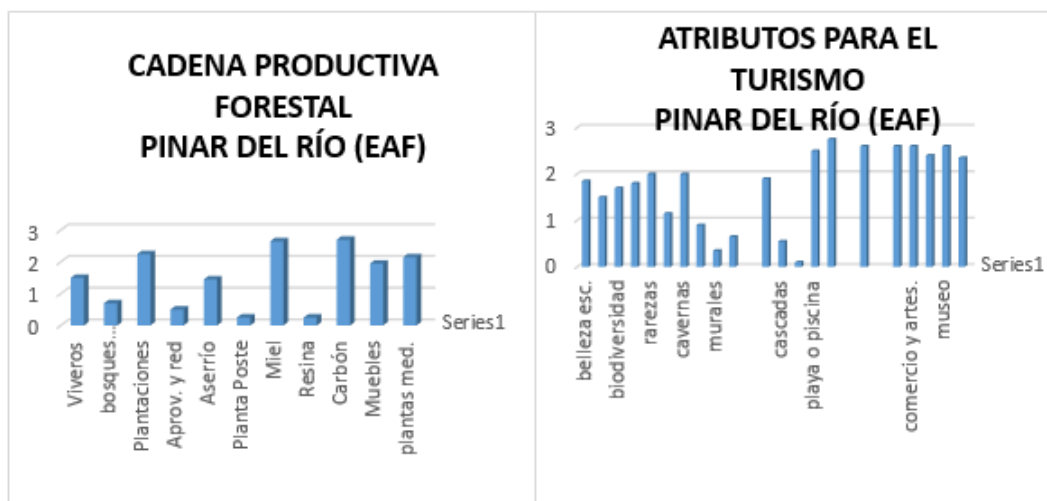


Figure 8. - Elements of the forest production chain and landscape attributes in Pinar del Río Agroforestry Enterprise (EAF)

In Pinar del Río, although to a lesser extent than Macurijes, La Palma, Minas and Guanahacabibes, both elements can be appreciated, in addition to the fact that it is a provincial capital with greater facilities for tourism logistics in terms of lodging, transportation, commerce, among others (Figure 8).

Summarizing what was stated by those surveyed, the results were as follows:

As could be seen, one of the sites with the greatest integrity in terms of elements of the productive chain and landscape attributes that can be appreciated by tourists, was Macurijes, followed by La Palma, Minas de Matahambre and Guanahacabibes, so they should be priority destinations when designing route variants. Viñales could be included in secondary variants as could La Güira.

Methodological elements for route design

1. Name of the identification of the route. In this case: FORTUR forest-tourist route.
2. General data of the route.
3. General location and georeference.
4. Basic services.

The following are recognized as basic services: drinking water supply, availability of sanitary sewage, excreta disposal, public lighting, electric power distribution, and others.

5. Type of mobilization and route structure.

By car to move from one attraction to another, while walking through the different productive sites, trails, cultural attractions, among others along the route.



6. Interconexión con los principales puntos de emisión turística.

The structure of the route includes the schedule of activities: duration, departure time, price, rate, minimum number of people.

7. Possible interactions with other existing routes and destinations.

8. Tourist attractions along the route.

9. Modalities of tourism on the route.

In addition to hiking, bird watching, landscape viewpoint, contemplation of flora and fauna diversity, as well as other tourism modalities, everything related to the particularities of forestry production and guided visits to the different links in the forestry production chain with trained personnel are included.

10. Visitor profile: people interested in interacting with nature and learning about forests and their presence in the landscape.

11. Tourist services.

12. Tourist safety.

13. If there are public health services, hospitals, medical clinics and national police units, other national police services.

14. Image of the route layout.

15. Itinerary of the route mounted in GIS with variants.

Plan de marketing

In order to prepare the marketing plan, the following will be taken into account:

- Situation analysis (surveys and interviews).
- Preparation of SWOT matrix.
- Elaboration of internal factors (EFI) and external factors (EFE) matrices.
- High impact matrix and strategies for the route according to matrix analysis.
- Marketing Mix strategies, taking into account: product, price, place. Promotion: advertising, billboard, destination information billboard, cultural attractiveness pictogram, approach signs, public relations and media.
- Marketing plan budget.



CONCLUSIONS

The respondents selected the sites with potential for the route, the most outstanding being Macurijes. The methodological elements for the design of the forest-tourist route were presented, with the necessary explanation for its understanding.

ANNEXES

Survey

The main objective of this survey is to know criteria about the most representative sites in the forestry production chain in the province of Pinar del Río and their possibilities as tourist destinations, to be included in a forestry-tourism route. In advance we thank you for your participation and we seek the truthfulness in your answers that will be valuable contribution to this research.

General data:

Age ____ Sex ____

Schooling: Elementary ____ High School ____ Secondary ____ High School ____
Technical ____ Specialist ____ Professional ____

Institution where he/she belongs: MES ____ MINTUR ____ MINAG (Forestry Sector)

Occupation: _____

Regarding the questionnaire, respondents were asked to rate between 0 and 3, with 3 being the highest value, the following items:

Posibilidades para el turismo.

1. Representative forest production sites in Pinar del Río.
2. Chain links owned and quality.
3. Other considerations you may wish to add.

The sites presented are: Viñales, Macurijes, La Güira, Guanahacabibes, Minas de Matahambre, La Palma and the possibility is given to include another that they consider.

For the attributes of the forestry production chain, the following are presented:

Nurseries and/or germplasm (seedbeds) ____; natural forests ____; Plantations ____;
Sustainable timber extraction and road network ____; Sawmill ____; Electric pole plant
____; Honey production ____; Resin production ____; charcoal production ____; Furniture
industry ____; Medicinal plant nursery ____; Others Which?

Regarding the possibilities for tourism:



Scenic beauty ____; Trails within the forest ____; Biodiversity____; Endemism____; Rarities____; Archaeological elements ____ Which ones and value? caverns ____; petrifications ____; Murals ____; Viewpoints____; Others _____.

Hydrological elements: River____; waterfalls____; waterfalls____; waterfalls____; beach____; nautical tours____. Other Which ones? _____;

Surrounding communities____; Cultural elements: Culinary ____; Commerce and handicrafts ____; popular culture activities____; Historical elements: Museum ____; Parks and statues____; Others. Which ones? _____.

Thank you very much.

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Conflict of interests:

The authors declare not to have any interest conflicts.

Authors' contribution:

Greicy de la Caridad Rodríguez Crespo: Conception of the idea, literature search and review, instrument making, Instrument application, compilation of information resulting from the instruments applied, statistic análisis, preparation of tables, graphs and images, database preparation, general advice on the topic addressed, drafting of the original (first version), review and final version of the article, article correction, authorship coordinator, translation of terms or information obtained, review of the application of the applied bibliographic standard.

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