

An Interpretive Trail for the Sustainable Development of Ecotourism in Pachangara - Oyón, Perú

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Abstract

The interpretive-trail for sustainable ecotourism development connects the set of water resources in Pachangara and Oyón districts, as well as the set of its tourist resources (cultural heritage as archaeological complexes and rural communities' areas) for their assessment and interpretation; sets information to treat about touristic parades, attention schedule, interpretive panels, signage, and resting places. Pachangara and Oyón districts are situated in the of Oyón province, in an area where Huaura River and Paton lagoon converges. This area has geographical features that allow the convergence of several water resources (high Andean lagoons, thermal pools, natural waterfalls, among others), is located in the Churin Valley where the Huaura river and its several tributaries supplies water service to the peasant communities that comprise it, giving unity to the valley and identity to the population. The constructions, in which clean technologies will be applied, will be made with biodegradable materials and available in the area to minimize impacts on the environment.

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I. INTRODUCTION

It is widely accepted that ecotourism contributes to the conservation and protection of threatened species [1] and cultural heritage throughout the world [2]. It is a reliable tool to improve local economies, especially in underdeveloped regions [3] [4]. In remote and pristine areas, ecotourism has been responsible for generating income for environmental management purposes. Other possible positive impacts include: 1) providing income and employment to local communities [5], 2) financing of conservation initiatives [6] [7], 3) protect new areas [8] [1], and 4) be a reliable tool for environmental education [9].

The main objective of this proposal is to increase the development of ecotourism in the districts of Pachangara and Oyón. The specific goals of this project are to identify the tourist resources of the

mentioned districts and to propose the interpretive path in the study area.

II. METHOD

•Pre-field stage:

Previous research was conducted in the study area (Pachangara-Oyón), identifying the current situation and tourism potential in the area. Secondly, maps of (Pachangara-Oyón) were made to determine its geographical characteristics as hydrological, geomorphological, relief, and know its demography.

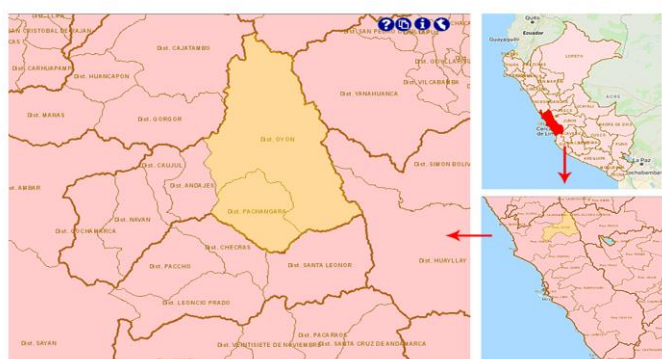
•Field stage:

More than one field visit to the Churin Valley was carried out to learn about the environment of water resources and cultural heritage. Also met with local authorities to conclude future agreements on sustainable tourism.

The tourist resources of the districts of Pachangara and Oyon were identified. Subsequently, the interpretive path was outlined in the study area, in the communities of Pachangara and Oyon.

•Cabinet stage:

In the cabinet, all the information collected in the field was ordered to determine the proposal by identifying ways to improve the development of ecotourism from the interpretive trail program in the districts of Pachangara and Oyon, as shows in “Fig.1”.



State: Lima

Province: Oyon

Area: 252.05 km²

Population: 2 526

hab (census 2017)

Figure 1. Location map of the districts of Pachangara and Oyon

2.1. Pachangara district information

The district of Oyon “Fig. 2” is one of the six districts of the province of Oyon, located in the department of Lima, under the administration of the Regional Government of Lima-Provinces, Peru. With an altitude of 135 m.a.s.l.



Oyón district

information

State: Lima

- Province: Oyon
 - Area: 887.61 km²
 - Population: 12 150
- hab. (census 2017)

Figure 2. Location map of the district of Pachangara of Oyon

2.2. Ecotourism Attractions:

The Plateau: This complex has three indoor pools. Machay Baths or Don Bosco of 32°C for muscle rehabilitation; Jatun Baths or Santa Rosa of 34 ° C for liver and stomach conditions and Ñahuin Baths

or Lord of Miracles of 35 ° C that cure bronchial diseases.

Youth Baths: They present facilities for adults and children. In this place, the outcrop of water is composed of a main and a secondary water jet. The first is recommended for headaches and eye diseases [9]. The second, which falls hard, is an excellent «massager.»

Mamahuari Baths: It consists of a natural pool and a small cave very hidden. Only a few meters away, a small waterfall ends in a larger natural pool that constitutes what they call the Bride and groom's bath.

To Baths: At the entrance of the district. It has modern facilities with individual water inlets of temperatures from 38 ° to 44 ° C. “Tab. I” and “Tab. II”

The place was visited on May 23, 2019, and the following attractions and potential tourist resources were identified to connect on the interpretive route “Fig. 3”:

Table 1. List of tourist resources in the study area, in the district of Pachangara

Tingo Thermo medical baths		
Latitude: 10° 49' 42.06" S	Longitude: 76° 52' 58.24" O	Altitude: 2 300 m. s n m
Hotel Ayarpongo		
Latitude: 10° 47' 42.92" S	Longitude: 76° 52' 24.16" O	Altitude: 3 267 m. s n m

Table 2. List of tourist resources in the study area, in the district of Oyón

Comunidad Campesina Santo Domingo de Nava		
Latitude: 10° 43' 37.20" S	Longitude: 76° 50' 15.57" O	Altitud: 2 995 m. s n m
Comunidad Campesina Viroc		
Latitude: 10° 41' 14.16" S	Longitude: 76° 47' 40.21" O	Altitude: 3 284 m. s n m
Iglesia Matriz de Oyón		
Latitude: 10° 40' 16.79" S	Longitude: 76° 46' 2.16" O	Altitude: 3 650 m. s n m
Complejo Arqueológico Quillahuaca		
Latitude: 10° 41' 8.60" S	Longitude: 76° 44' 43.92" O	Altitude: 3 700 m. s n m
Laguna Patón		
Latitude: 10° 39' 44.80" S	Longitude: 76° 42' 5.71" O	Altitude: 4 100 m. s n m



Figure 3. Map of rural communities (left) and tourist resources (right).

III. RESULTS

Interpretive trails are defined as organized infrastructures that are located in the natural, rural, or urban environment to facilitate the visitor's recreation with the natural environment or protected area where the trail is established.

The “Fig. 4” and “Fig. 5” design of the interpretive trail «Ulqu-wiqi», in the districts of Pachangara and Oyón, (44 kilometers). The Quechua term "ulqu-wiqi" is translated as "mountain tear." The choice of the name is due to the hydrographic and orographic richness that converge in the area, as well as providing a tourist identity to the peasant communities there.

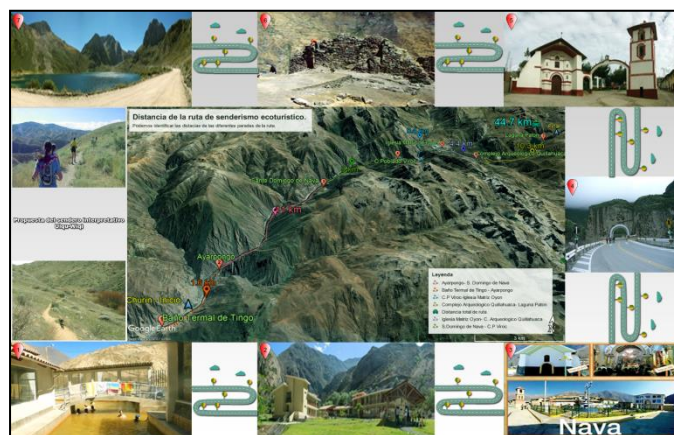


Figure 4. Design of the interpretive trail «Ulqu-wiqi», in the districts of Pachangara and Oyón



Figure 5. Interpretive trail's height in m.a.s.l.

The necessary equipment, “Fig. 7” (stops, times, interpretive panels, signage, guardrails, and resting places) for the interpretive path will be taken from foreign models of interpretive trails with water resources themes.

In “Fig. 8” is possible to distinguish the shelter designed for tourists, which will serve in environmentally friendly materials.



Figure 6. Interpretive trail's view and trail's signage.

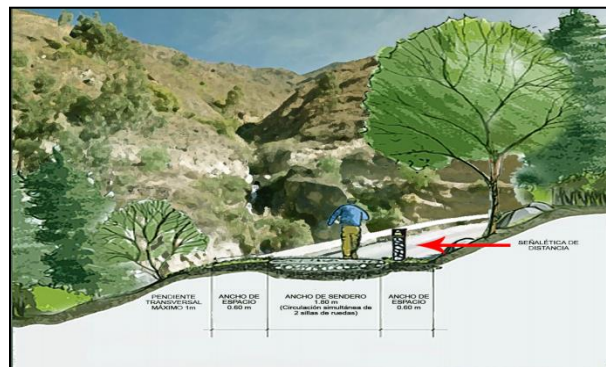


Figure 7. Interpretive trail proposal: tourists refuge. Figure 10. Interpretive trail's viewpoints.

The interpretive path will have the application of clean technologies: construction of dry baths, septic tanks, and installation of solar panels at strategic points to illuminate the path, they will also have photoluminal paint. The constructions will be made with materials available from the area. “Fig. 8”.

IV. DISCUSSION

The results of this project prove the hypothesis that an interpretive path would improve tourism in the districts of Pachangara and Oyon. Trekking is of great importance in this place and is a tourist activity that constitutes the core of communication between the villages[10]. These roads, often used on foot or horseback, have been lost over time, and thus part of the cultural heritage of the community. For them, the trails have simple signage that shows us the modalities of the marked roads and how to understand their acronyms and paint marks on the ground.

V. CONCLUSIONS

The districts of Pachangara and Oyon have little participation of the local population and the concern of municipal authorities trying to manage tourism (which is based only on thermal baths). It also lacks adequate infrastructure in the resources they offer; there are no paths that link other resources that are not just thermal baths, much less find information panels

or interpretation centers. The study area has great tourism potential, it has resources that have not been exploited yet, and that is why we have included them in the interpretive trail.

Through the implementation of an interpretive path, we can unite and publicize the seven places with great tourist potential, taking advantage of its scenic beauty and diversifying the tourism of Pachangara and Oyon. Avoid that tourism not only focuses on thermal baths but also offer other destinations where they practice adventure or experiential travel. The local population also benefits by preserving their culture and tradition, not losing their roots, and participating in the conservation of these resources.

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