Resumen

El propósito de la investigación fue describir e ilustrar el inventario y el aprovechamiento de la ruta eco turística Ñanorqupisachas Chinchay. El diseño de investigación fue descriptivo e ilustrativo. La población y muestra, son un sistema geomorfológico. La ruta eco turística “Ñanorqupisachas Chinchay”, posee un potencial en especies: 40 de flora, 10 de fauna, únicos, propias. El relieve del terreno tiene la forma de herradura y clima montano seco y húmedo por los pisos altitudinales. La accesibilidad en el sitio arqueológico Llaqtapata, es considerable, por el estado regular y mantenimiento del camino inca, posee dos accesos, en el más extenso, se aprecia y disfruta el paisaje, avistando diversas especies. El sitio arqueológico, oferta cinco sectores diferenciados, encontramos construcciones de vanos o portales, andenerías, muros de contención y terrazas, con escalera de acceso principal, viviendas una cantidad superior a 100 en forma de construcción ovoide, apircado con técnica mortero simple, además de batanes, qollotas, fragmentos de cerámica. Cuevas con restos humanos en las cumbres, enrollados con soguillas de paja en posición fetal. El sitio arqueológico fue un centro de control administrativo de intercambio de productos, además de trabajos de fundición de metales. Las áreas a independizar suman 44. 57 há de Llaqtapata y 35.40 há de Qoriwayrachina.

Palabras clave: aprovechamiento, inventario, ecoturismo, ruta.
1. Introduction

The Apurímac region presents comparative advantages with respect to the ecological, geographical, hydric, archaeological, and cultural aspects; that are not developed due to limited road infrastructure, services and communications that prevent a greater influx, as described in the Apurímac Regional Development Plan to 2021 (PDRC).

This is corroborated in the preliminary research phase, consulting people, doing a brief survey on whether they have knowledge about the existence of six tourist resources, one of them Llaqtapata-Chinchay or known Chinchay-Llaqtapata Forest, the results were as follows: Of 106 surveyed, 93 answered that they had no knowledge whatsoever, that is, 88%, the rest of resources such as: San José de Chontalla, The Ecotourism Zone of Lliupapuquio Lakes and ApuTimani, indicate that 95% did not have knowledge, 91%, 85%, respectively. The remaining known tourist resources, such as Sóndor and Achanchicc, indicate that 78% and 81% had knowledge.

This survey accredits the results, based on the information in [14] which allowed to identify, recognize the potentiality of the resources selected for the survey, and the importance of the resource in current research.

The Apurímac Regional Tourism Plan 2018 to 2025 (PERTUR), is explicit, when it cites that there is much to work on, from the inventory, route registration, brand creation, formalizing tour operators, strengthening associations of community counselors, among others.

The Apurímac region has three hierarchy 3 tourist destinations, these being: Piedra Saywite, Anthropological Museum, Sanctuary of Ampay, located in the city of Abancay, the first an archaeological complex, the second an exhibition museum and the third a product Ecotouristic.

However, there is a considerable amount of tourist resources, ranked between 1 and 2, which present limitations to strengthen their use, despite the fact that they have unique attributes and even combine the natural, archaeological and cultural.

According to [14] only the provinces of Andahuaylas, Aymaraes and Chincheros, located in the Apurímac region, have a considerable potential of resources: archaeological, natural, cultural, which in attributes are incomparable, accessibility to tourist resources is regular, with limitations for secondary trails, however, [13] are protected by the peasant communities, otherwise they would be disappeared and looted completely, this function is related to the protection of the Political Constitution of Peru, in Title III on Economic Regime, Chapter IV on land tenure and ownership and the Law 24656.

Likewise, to date there are few specific studies on the potentiality, accessibility, growth by subsectors contained in the tourism sector both at the regional and provincial level, the primary information is weak, this is confirmed by specialists in tourism.

Interviews with former officials who were in management of the Regional or Sub-Regional Directorate of Foreign Trade and Tourism; such as: Arqueólogo Enmanuel Gómez Choque, Mg. Licenciadoen Turismo Lisbeth Salas Ccente, Arqueólogo Jorge Rosas Fernández, confirm the above, also recognize that the tourist routes that exist are promoted, manage to consolidate from private activity, presenting external deficiencies to sustain themselves. Transport companies, travel agencies, lodgings, hostels, restaurants, recreation; They are adapted to the conditions, type of client, regulations.

From March to December 2020, the reduction in the frequency of travelers was extreme, it began with a slight economic recovery, not being enough, due to the sharp decline in family businesses, whose operation and presence, as a micro-enterprise, covers 95% of the support plant.

Regarding the eco-tourist route under study it is used only 30%, the Inca trail or kapaccñan, serves to highlight the anniversary of the creation of the Pacobamba district, every year until before the Covid-19 Pandemic. developed the ceremony of the Llaqtapata marathon, it lasts nine hours, the 12 km, are traveled by athletes, whose infrastructure is the Inca trail or kapaccñan.
The archaeological site of Llaqtapata, the Qoriwayrachina Mineral Washing and Foundry Center, the Chinchay Native Forest, are not used rationally, there is no administration, conditioning of the four places; for this reason, exploitation is minimal and the few visits are made by local hikers, motivated by teachers to admire the landscape from the summit.

The research project is justified because it will describe the potentiality and access, to rationally use, protect and conserve flora and fauna species, limit the environmental impact on the four tourist resources. In addition, the study is legally supported by Resolution No. 013-2015-GR-APURÍMAC-CR, on application studies regarding corridors and ecotourism areas.

The objective of the research was: Describe and illustrate the inventory and use of the eco-tourist route "Ñanorqupisach as Chinchay". Regarding the state of the art, scientific articles related to the purpose of the research were selected, we detail:

[6] in his work "Nature tourism: a sustainable tourism product", he tells us that the way in which conventional tourism has developed, recognized as non-social tourism, has caused it to be maintained, there is a frequent depredation of natural resources, alteration of its ecosystem, landscape and wildlife stress, added to accidents with groups of disabled hikers, has raised the alarm, due to the degree of violation and alteration in the tourist resource, which served to generate and implement a paradigm of greater responsibility and sustainability of tourist destinations.

[2] in his work "Proposal of an ecotourism route for the sustainable development of the Shitabamba village in the Cutervo-Cajamarca national park," he states that the purpose of designing the ecotourism route was for sustainable development in the Shitabamba community.

The main thing was the awareness, participation, and approval of the disposition of the community members for the development and use of the ecotourism route. They describe the potential, based on the identification of the resources located along the route, which are categorized as: natural, cultural, added that they are in the process of construction, signage and tourist implementation.

The methodology was based on the manual for the process of inventory and ranking of tourist resources, and the methodology for the design and operation of trails of the Secretariat of Tourism of Mexico.

Among the concepts that directed the research we have:

[3] accessible tourism allows generating conditions for people with access demands, which includes...
dimensions of mobility, vision, hearing and cognition, to function independently, with equity, dignity in front of others, to turn towards a Social Tourism, at the time of delivery and use of products, services and tourist environments (p. 519)

For [9] accessible tourism "is an activity that all people can access regardless of their abilities, thus enabling full participation and integration" in the whole of society” (p.26)

Regarding the detailed, updated information that must be provided on a tourist destination, according to [12] indicates that the research on supply and demand that is carried out for a tourist destination determines the effect regarding the conditions for social tourism, taking great interest in the approval, travel decision and visitor flows, the availability of income regarding their spending capacity in the tourist destination; the study of supply and demand is essential to know the trends of the future to plan actions in the short and long term.

Regarding Ecotourism, according to [12] it is an alternative from before and strong after the Covid-19 Pandemic, because it allows starting the economic reactivation at the local level, compared to other types of tourism, whose way of working prevents its reactivation or adaptation to the circumstances caused by the Covid-19; [11] ecotourism is linked to a specific segment of tourists, who are generally inclined towards excursions, love nature, take pleasure in observing landscapes, delight in the interaction of flora, fauna, the relationships between species with the landscape, present predisposition to camp, to go inside to know different specific sites or places, whose landscapes are different, as they advance along the trails, they appreciate the water surfaces or lakes, mountains, Andean buttresses; forest and shrub forests, in this area water tourism is also considered, in the variant of observation of species of marine flora and fauna.

Likewise, accessible tourism focuses on the continuous effort to guarantee that tourist destinations, products and services are easy to enjoy, encompassing all types of people according to their physical, psychological and emotional capacities, plus age. This improvement includes places with public or private property.

For [5] “A local destination can have consolidation as a final result or on the contrary it can stagnate, this will depend on the possibilities of the economic sectors and the interest of social actors in tourism”.

According to [10] the territorial planning of the tourist activity is fundamental, but the participation of rural inhabitants is decisive, where tourist resources are frequently located, because their contributions determine variables that must be categorized and prioritized, in order to perfect the intervention strategy in tourist resources, in addition to laying the foundations for sustainable development.

2. Materiales y Métodos

According to [4] We came to determine that the type of research is descriptive-propositional, because knowledge is expanded from the diagnoses, in addition, a proposal is delivered, which specifies the rational use and conservation of resources tourism contained in the eco-tourism route, added to the tourist information office project and the awareness-training pilot for future tourism operators in tourist orientation activity, bussiness formalization.

The research design is descriptive and illustrative. The place of study is the district of Pacobamba, the peasant community of CcerabambaAndina and part of Pacchani.

The population and sample are a geomorphological system that includes: forest, mountain range, flora, fauna, carriage trails, bridle paths, trails, sanitary facilities, communications, relations between residents and tourist resources.

The method is deductive, [7] we are based on the procedures and indicators approved in the Manual for updating and inventory of tourist resources of the Ministry of Foreign Trade and Tourism of Peru.
According to [8] “The national inventory of tourism resources constitutes a management tool to strengthen the development of tourism, contains real, ordered and systematic information on tourism resources, identifying the country's tourism potential” (p.14)

3. Results and Discussion

3.1. Physical-Legal Sanitation

On the Inca trail, the archaeological site of Llaqtapata, there is no physical-legal sanitation, there is an inventory card, which, if updated, likewise there is no inventory card of the great Inca trail or kapacñan. The Chinchay forest, the Qoriwayrachina Mineral Washing and Smelting Center, are on private property, with a seat of ownership in the Public Registries at the Andahuaylas City Office. Those adjacent to the Inca trail and archaeological site are: first, the peasant community of CcerabambaAndina, the part of Pacchani, Chinchay and Qoriwayrachina forest owners. The peasant community of Ccerabamba Andina was recognized with Resolution No. 009-84-DR-XIX-A on January 10, 1984, the territory was registered in the mechanical file 2959, electronic entry 02005401, in the area of 1041 hectares. Pacchani's partiality was recognized with Resolution No. 151-84-DR-XIX-A on December 14, 1984, the communal territory is not registered.

3.2. Attributes and landscape

The landscape is observed geographical characteristics in the background, such as: inter-Andean valleys, steep slopes, with terraces, high slopes, puna landscape, hills covered by ichu, slopes covered with mist, it has several sub-Andean, montane and altimontan ecological floors.

Figure 1. South side to the archeological site of Rumi cruz, observation of the Ausampara Apu pattern.

The Chinchay forest presents various plant formations between eucalyptus forests, shrub, arboreal and herbaceous species, as well as important ecosystems such as wetlands.

Figure 2. West side of the Chinchay Forest. Observation from the Inca trail.

On the way through the bridle path, we find wooded plant formations with the presence of phanerogams whose identified families are: Poaceae, Rosaceae, Verbenaceae, Fabaceae and Myrtaceae, added to the
presence of Pterydophytas and Bryophytas classified as cryptogams.

**Figure 3. Northwest side of the Chinchay Forest, observation from the Inca trail.**

Within the species of fungi and lichens, we find: makimaki, noodle fungus. Regarding zoodiversity, we find: Andean bear (*Tremarctos ornatus*); Andean puma (*Puma concolor cabrerae*); white-eared opossum (*Didelphis pernigra*); Andean fox (*Pseudalopex culpaeus*); skunk (*Conepatus chingarex*); deer (*Odocoileus peruvianus*); humming bird (*Oreotrochilus spp*); condor (*Vultur grifus*).

Archaeological site of Llactapata; the review of the ethnohistorical information of the archaeological site of Llactapata, it has not been possible to obtain any type of information, some isolated works carried out by the National University of San Antonio Abad of Cusco are mentioned, in the 60s of the 20th century, there is loose information on some explorations to the site without having indications about the elaboration of an article or a historical review of the Llactapata site.

The archaeological site is located in the upper part of one of the foothills of Cerro Ausampara and the peasant community of Ccerabamba and part of Pacchani, towards the North-East, on an altitude of 3753 meters above sea level, between the UTM coordinates 708937.00 East and 8500453.00 North, has an approximate area of more than 15,450 m², and presents an indeterminate sequence of occupation, there is a presence of local and Inca style ceramics.

The archaeological site has five sectors: The *first Ceremonial*, a small rectangular structure, with its access opening facing east, on the surface of the small hill there are buried burials that have been looted. Construction style, walls set in sandstone, without cultural work, without mortar technique.

The second *main square*, located in the lower part, a plain measuring approximately 20 ml by 17 ml, the space surrounded by half-moon architecture, by retaining walls and terraces, which support this main square, in the northwest direction, we located stairs access to the housing, terraces and ceremonial sectors.

**Figure 4. Facings that correspond to terraces and terraces, observation from Llactapata.**

The third *housing* sector, has a characteristic pattern, the enclosures are made up of ovoid-shaped walls, which enclose the circular and square shape, mostly built with irregular stones without any type of mortar, stone on stone, they rest on large terraces built To create spaces for housework, on the surface there are lithic instruments for housework, fulling mills, fulling hands; The entire housing complex is interconnected by corridors and stairs. The terraces were developed following the topographic configuration of the hill, with orientation towards the ridge, keeping construction styles.
The fourth Agricultural sector occupies the entire hill in directions: south east, northeast and north; It presents a sequence of terraces and terraces, several of which are associated with circular-plan housing units in poor condition; all construction was carried out following the topographic configuration of the hill.

The fifth sector Cemeteries are located within the limits of the occupation area and outside the urban area; We found on the rocky ridges using the caves "machais" correspond to burials of the people of the town; the state of the funerary bundles in the fetal position, rolled up of ropes made of straw, associated with vessels, instruments such as loom and pieces of metallurgy made of copper and others alloys.

The archaeological site of Llaqtapata is cultural evidence, due to its strategic location, it served as an administrative control center for the exchange of products from the valley, Quechua floor, as well as a supplier of metals in the north-east part, where the site is located. archaeological site of Qoriwayrachina, where it is supposed a center for mineral washing and smelting works.

3.3. Road and pedestrian acces-trails

Reaching the eco-tourist route "Ñanorqupisac has Chinchay", the starting point is the main square K 0 + 000 of the city of Andahuaylas, during the journey in K 3 + 000 is the district of San Jerónimo, this section is within the national route or road, it continues with an asphalt track to the Kishuardá district at K 50 + 000, it continues to the Huancarama district at K 75 + 100, from here K 0+ 000 to the district of Pacobamba K 5 + 500 and from Pacobamba to Ccerabamba-Andina are K 13 + 500, whose main attraction is the nature that borders the trees and green pastures during these sections, slopes with terraces.

Figure 5. Caves known as “Machays”, observation on the way to Pico de Loro summit.

To reach the Andean Ccerabamba Community, where the Chinchay forest is located, the Administrative and Commercial Center of Llaqtapata, the Qoriwayrachina Mineral Washing and Smelting Center, exceeds 90 Km.

The first adventure route is: Rumi cruz-Carpi II-Carpi I-Campanayocc-Llaqtapata; It is the longest, the route must start at 6:00 am to reach Llaqtapata at 12:00 pm, on the way we appreciate: chinchay forest, caves with human remains, formations or relief, varied climate, fauna and flora; the topography reaches between 5 to 10% and other sections reach 20% of inclination; the total travel time, which includes the return, is 11 hours.

The second adventure route is: Carretera-caminoherradura-Carpi I-Campanayocc-Llaqtapata, it is short, whose first 2 km, presents ascent of two hours, until reaching the Inca trail, located at the top, from the Carpi I landmark to Llaqtapata is 4.5 hours.

Figure 6. Northwest side of the Chinchay Forest, observation from the Inca trail.
The two previous routes, the conditions are subtracted to perform: hiking, camping, others.

Figure 7. Inca Trail or Kapaccñan, west route, Carpi II sector.

The total travel time that includes the return is 8.5 hours; on the way we appreciate: formations or relief, varied climate, fauna and flora; the topography reaches between 5 to 10% and other sections reach 30% of inclination, the third route is from the Paccchani district: Pacchani-horseshoe road-Inca road-Llaqtapata; It is short whose first 2 km.

Figure 8. Inca trail or Kapaccñan, west route, Carpi II sector.

It presents a steep ascent on average 25%, the archaeological site of Llaqtapata is reached in 3 hours, the total travel time is 5.5 hours. The difficulty that exists focuses on: you must enter by carriageway to the town of Pacchani, then the excursion is organized, to move up the slope and blade, on the way you can see: formations or relief, varied climate, fauna and flora. It's a route special for trekking and camping.

Figure 9. Inca trail or Kapaccñan, east route, Carpi II sector.

3.4. Support plant

The cities of Andahuaylas, Talavera and San Jerónimo, make up the support plant of the Chumbao Valley, they are linked by the river of the same name; From the main square of the city of Andahuaylas, the reach times are: 10 minutes to Talavera and 06 minutes to San Jerónimo, all of them present considerable conditions, expansion of tourist infrastructure, regarding: hostels, lodgings, hotels, restaurants, recreation, cevicherías, chifas, the three cities have a food market that works six days a week.

All have a low police service or solid waste collection service. In the case of the city of San Jerónimo, there are 03 recesses, 20 restaurants and 04 cevicherías; 02 hotels without hierarchy, added that all the gastronomic infrastructure of this city is located in the categorization between 01 and 02 forks, except for 02 recesses.
3.5. Exploitation

For this reason, the ecotourism area can only be used with small groups, maximum 9 to 10 people, including one to two guides, offer packages of visits between 3 to 4 days a week, the rest are cleaning and maintenance-conservation at the week carried out by the tour operator that manages the ecotourism zone, per month 12 to 14 days can be used; you can receive a maximum of 3 groups per day; It is dangerous, high risk to receive more than 3 groups per day, because it would exacerbate the physical, chemical and acoustic pollution of the ecotourism zone.

They can offer service packages during the twelve months of the year, distinguishing the recommendations to the visitor regarding protection in the rainy season.

The administration of the ecotourism zone is a function of the association of tour operators of the Campesino Community of Cerabamba and part of Pacchani. This association is the one that implements facilities for the collection of solid waste, along the route to the archaeological site of Llaqtapata.

In addition, they can offer the overnight service to visit at another address, such as Qoriwayrachina.

The area can be exploited as it is, it is only a minimal investment, in the case of installing a control-registration booth for access statistics, which will serve as input for future projects. The cost of the orientation service, security, loading (if there is) food, is 40.00 soles per person.

4. Conclusión

The eco-tourist route ÑanorqupisachasChinchay, has a potential of 40 species of flora and 10 unique species of flora, the species that exist are their own, a dry and humid montane relief and climate through the altitudinal floors, in addition to archaeological sites such as: Llaqtapata, Qoriwayrachina, Kapaccñan.

Accessibility is medium to higher, due to the regular condition and maintenance of the internal roads and the Inca trail, as well as two accesses, the first being where the landscape is most appreciated, enjoyed, and sighting species, being this: CcochaChuyuna - Carpi-Manzanayocc-Llaqtapata, with a travel distance of 6.50 km in a time of 5 to 6 hours.

The route is not accessible for people with lower limb disabilities or invalids, in addition to the blind, the Inca trail has an average dimension of 70 cm to 95 cm wide.

The Llaqtapata archaeological site offers five different sectors, we find openings or portals, buried burials, retaining walls and terraces with a main access staircase, houses more than 120, an ovoid construction, packed with mortars as well as fullers, qollotas, fragments of ceramics, terraces and terraces of the agricultural sector, the construction of these sectors follows a pending course; In the case of cemeteries, we find "machais" or caves with human remains on the peaks and caves, wrapped with straw ropes in a fetal position.

The archaeological site is closely linked that it was an administrative control center for the exchange of products, in addition to metal smelting works.

The area to be made independent totals 80.50 hectares, which includes the easement zone, main access, archaeological site, protection zone, in such away as to sustain the declaration of a zone of exploitation and cultural heritage, which guarantees the intervention of projects to implement recovery value.
This function and management is in charge of the local municipality of Pacobamba; Likewise, it must generate conditions, establishing a minimum series of administrative requirements to approve the operation of the association of tour operators, for the rational use of the ecotourism zone, highlighting that first, the partners (community members) in operation must be provided with capacities. tourism, which is achieved with the intervention of the José María Arguedas National University and the Sub-Regional Directorate of Foreign Trade and Tourism Andahuaylas.

References


