

VERNACULAR ARCHITECTURE AND CULTURAL LANDSCAPES IN THE SONDONDO VALLEY (PERU)

E. Sáez^{1,*}, J. Canziani¹

¹ Centro de Investigación de la Arquitectura y la Ciudad CIAC, Pontificia Universidad Católica del Perú PUCP,
Avenida Universitaria 1801, Lima, Perú - (esaez, jcanziani)pucp.edu.pe

Commission II - WG II/8

KEY WORDS: Cultural Landscape, World Heritage, Pre-Hispanic Urbanism, Vernacular Architecture, Andes, Perú

ABSTRACT:

Sondondo is an inter-Andean valley located between 3,500 and 4,500 meters above sea level. Inhabited, transformed and modelled since ancient times by the local rural communities, an extraordinary cultural landscape has been created through their particular relationship with the environment. Since the pre-Hispanic settlements (Wari 600 AD), through colonial indigenous “reductions”, to the villages of vernacular architecture, which are at the foundation of contemporary populated centres, the territory has been variously and successively settled, inhabited and transformed. Its vernacular architecture has evolved at multiple scales, from domestic architecture to urban structures. It has created spaces for agriculture and livestock herding, and the spectacular agricultural *andenerías* (farming platforms and terraces) that have shaped the territory for centuries. The latter simultaneously developed irrigation infrastructures and techniques. The result is a landscape of great plastic effects, in a geographical setting bordered by the *apus* — tutelar mountains — traditionally “sacralized” by the Andean cultures. Such enormous architectural-landscape legacy is now threatened by imported global models of false modernity disrupting the fragile balance of lifestyles and territories. The objective of this research project, ongoing since 2016, is to assess this territory, catalogue its vernacular architecture and landscape units. It also aims to propose projects and initiatives for sustainable local development. The work has been made available to the Ministry of Culture of Peru to support its request before UNESCO to include the site in its World Heritage List.

1. INTRODUCTION



Figure 1. Farming terraces, Sondondo Valley. Source: Project files. Cultural landscapes, Sondondo Valley. CIAC-PUCP, 2018¹.

Peru ranks among the most environmentally diverse nations in the world, with 84 of the 108 life zones defined for the Earth (Holdridge, 1967; Onern, 1976). Its complex territory features the Andean mountain range backbone, the world’s highest tropical mountain range, the coastal deserts — whose shores are bathed by the cold waters of the Humboldt current, and the humid tropical rainforests sloping down the eastern Andes toward the Amazon plain. The first occupants of this unique landscape were hunters and gatherers (10000 BC) who engaged in extensive domestication.

This did not only include different plant and animal species, but they also the land itself through gradual cumulative transformations aimed at assuring vital water supplies, building adequate topsoil for production, and managing climate conditions. Altogether they aimed at creating ideal conditions for agriculture and animal herding in territories not naturally adequate for, or posed serious restrictions to, farming.

Transforming such diverse territories across the different regions of Peru resulted in multiple *cultural landscapes*. These are an ancestral legacy asset of enormous value to the nation’s heritage. Even more so if we consider them as an invaluable testimony of the historical processes of productive specialization demanded by these transformations. Such changes came about with the emergence of complex forms of social organization, thus triggering the development in the Central Andes of one an outstanding and unique civilizing process (Canziani, 2007, 2009).

However, despite this vast territorial legacy, there is practically not a single cultural landscape in Peru classified as a UNESCO World Heritage site. On the contrary, severe adverse impacts and accelerated degradation or destruction of these cultural landscapes are being driven by domestic “extractivist” policies framed by global resource exploitation. They are also the result of promotion of investments to develop natural resources, building the infrastructures required by this economic development model. Also, the pressures of a global development model, a foreign one but still influential — having formal and specific demonstrations even more different — contribute to these problems.

* Corresponding author

¹ All images come from de Project files. “Cultural landscapes, Sondondo Valley”. CIAC-PUCP, 2018.

We feel it is of utmost importance to assess the legacy assets of Sondondo Valley and their registration in the UNESCO Tentative submitted by the Ministry of Culture. This constitutes a first step towards the valley's nomination as a World Heritage site. Such nomination can be a fundamental tool for its safeguarding, and to protect the vernacular architectural legacy of this exceptional cultural landscape from growing deterioration and destruction.

This requires preparing territorial and urban planning guidelines to regulate interventions that are essential to meet modern day needs. In turn, they will provide adequate and relevant responses to help preserve the invariant characteristics of the valley's legacy architecture and landscape. Furthermore, they will lay down the foundations for sustainable local development planning, and the ongoing and sustainable adaptation of this living landscape's traditional lifestyles to contemporary ones.

This would allow facing the serious risk that emerges when, for example, the valuation of the archaeological heritage is segregated, and excludes the landscape and towns that are part of it. As a result, pathetic situations arise such as the ones in Cusco and the Urubamba valley, euphemistically called the "Sacred Valley of the Incas", where tourist mercantilism has turned archaeological monuments into a sort of theme parks. This irreparably degrades the territorial legacy and vernacular architecture of the historical centres of a cultural landscape of exceptional quality.

This project was developed in consecutive phases between 2015 and 2019. It was conducted by an interdisciplinary team of architects and archaeologists specialized in archaeology and landscape archaeology, architectural heritage, territory and landscape.

After identifying the various components of the landscape, its units were defined by analysing and describing them. For this, mappings and photographic records were performed, including drone flyovers.

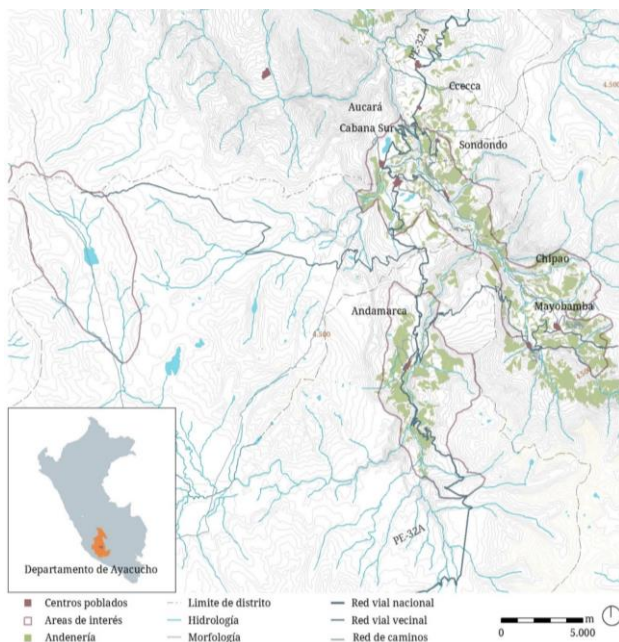


Figure 2. Sondondo Valley. Hydrographic grid, towns and agricultural systems.

On this basis, the inclusion of Sondondo Valley on the tentative list for World Heritage of UNESCO was suggested—all this in close relation with the communities and local authorities, the Ministry of Culture and UNESCO. Students of the Master's Degree in Architecture, Urbanism and Territorial Development of PUCP participated in this project. This contributed to the best knowledge of the site and local communities' wisdom.

2. CULTURAL LANDSCAPES IN THE SONDONDO VALLEY

2.1 The Sondondo Valley in the Peruvian Andes

The province of Lucana is located in the region of Ayacucho, in the Andean heartland. In a land of high mountains and plateaus, the Sondondo Valley is flanked by two outstanding mountains, the Qarwarazu (5,124 meters above sea level) and the Osjonta (4,597 masl).

Sondondo valley sits at the foot of its tutelar mountains or *apus* that in the Andean worldview symbolically connect the sky with the earth and the water that fertilizes it (Schreiber, 1993, 2000). These revered mountains crown the high Andean plains of the ecosystem known as *puna* (4,000 - 4,800 meters above sea level), where extensive natural pastures support herds of wild vicuna (*Vicugna vicugna*) and domesticated alpacas (*Vicugna pacos*) as well as sheep and cattle.

Ancestral livestock herding practices have led to the social transformation of these high-altitude territory. This includes the creation of wetlands by artificially flooding the grasslands to expand wetlands and pastures for animal herds. Another traditional practice is the building of different types of pens, generally together with small temporary shelters for the shepherds who manage the herds, and that create a vast wealth of formal, plastic and constructive diversity.

Both systems materialize a subtle and radical relation with the environment at the highest altitude and demonstrate the ancestral communities' capacity to sustainably anthropize them.



Figure 3. Farming terraces and town. Andamarca.



Figure 4. Qarwarazu snowcapped mountain, a sacred mountain in Sondondo Valley.

In these high-altitude plains, lagoons and wetlands are the main sources and reservoirs of water. They flow downstream along canal systems to irrigate the crops grown on farming terraces and platforms, and to supply water to local towns.

Sondondo Valley's hydrography is created by the relatively narrow canyon-like basins of the Negro Mayo and Mayobamba rivers that pour into the Sondondo River. This is where the name of the valley comes from. Its lower reaches, between 2,500 and 3,500 meters above sea level, span a Quechua ecosystem of milder climate. There, agricultural systems of terraces and cultivation platforms have transformed a territory that today features remains of archaeological population centres and surviving colonial era settlements.



Figure 5. Puna grasslands and corrals.

Although vestiges of earlier farming terraces dot the valley, massive terrace propagation in the Valley would have occurred in the Wari period (600 - 1000 AD), during the expansion in the Central Andes of the first imperial formation prior to the Incas.

These cultivation systems would be maintained during the subsequent local Rukana period, and then substantially expanded during the Inca era (1450 - 1532 AD). Such people privileged their intervention in the valley resulting in an area of greatest landscape beauty, both for the magnitude of the platform systems, and for the remarkable plasticity and composition of their modelling.



Figure 6. Canyons in Sondondo Valley.

This exceptional modelling results from the masterful adaptation of the terraces to the site's topography and varying slopes. They run from the riverbed, through the plains to then reach their upper limit in the rocky escarpments of the mountains that canyon them. In addition to the modelling of the terraces, in the intermediate plains, it is common to find a unique arrangement of farms and pens. Used alternatively, they were fenced by remarkably slender and delicately balanced stone walls. The delineation and the singular layout of these fencing walls bordering the fields create a landscape of unique texture over the plains that is a harmonious complement to the agricultural platform systems and the plotting of towns. The balanced integration of these landscape components or units enhances their overall value and gives a special character the valley's landscape (Canziani, 2017)



Figure 7. Farming terraces modelled on the topography with great plasticity.

We will not deal here extensively with the other components that significantly enrich this landscape, such as its ancient local roads and especially segments of the Inca Trail, or *Qhapaqñan*, running across the Valley, nor the carved rocks showing landscape representations. However, the latter deserve a special brief mention because the location of these carved outcrops points to their direct correlation with the areas where the platform systems are deployed, and point us to water reservoirs, canals and especially bands of terraced fields scattered in the surrounding agricultural landscape. Presumably, these stones carried a symbolic character connected to their locations and were references for the ritual activities by the communities inhabiting the territory.

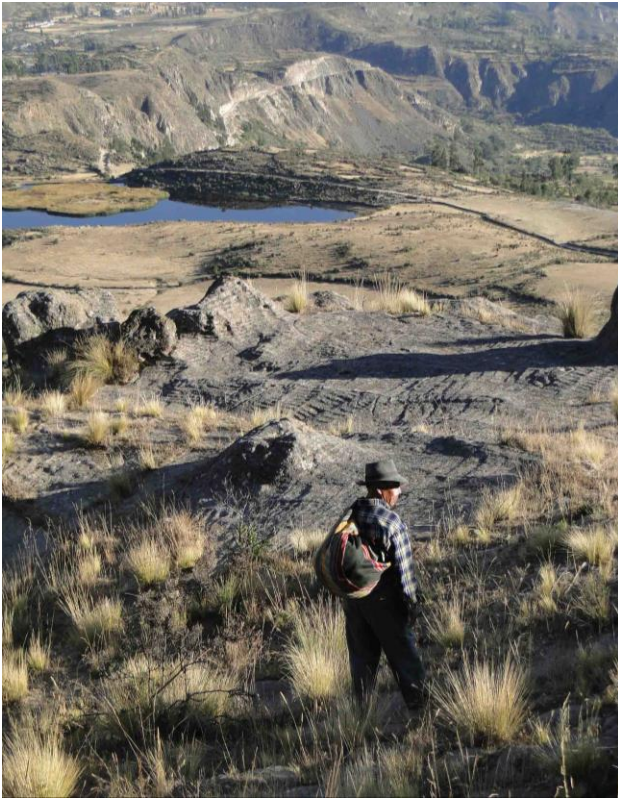


Figure 8. Carved stone. Luichimarca.

2.2 The historical evolution of towns

The valley's documented archaeological evidence shows that, despite changes in social and political organization, as well as in historical settlement patterns, the valley areas were always the location of choice to settle. This continuous occupation would respond to a persistent strategy to concentrate the population in lower-level ecological floors of more benign climates. A place closer to areas amenable to more intense farming to feed the local population. Likewise, this location is centrally located vis-à-vis the *puna* for grazing, and permits transverse vertical displacements from the populated centres, ensuring the agro-pastoral integration typical of the local modes of production.

Except for some remarkable local Inca monuments, the architecture of the archaeological sites, featuring these settlements also reveals a clear continuity. One is the use of building materials, principally stone and mud, and the other is the rationale of integrating closed and open living quarters. While the architectural typologies are diverse and changing, the logic to order the closed architectural spaces around an open space remains, be it a court or a terrace.



Figure 9. Typical town urban-rural layout. South Cabana. Sondondo Valley.

A case in point is Jincamocco, a Wari administrative centre near Cabana, where modular units surround a central courtyard. In Caniche, a Rukana settlement near Andamarca, despite the absence of a regular layout and the crowding together of architectural structures, these are, nonetheless, organized around open spaces or terraces to deal successfully with the steepness of the hill slopes where the site is located. This was also a consistent pattern in the characteristic *kanchas* of Inca architecture, where the roofed ambiances are arranged in a rectangular fenced module around a large central courtyard.



Figure 10. Caniche, archeological village from Rukana era.

After the conquest and the establishment of the colonial system in the 16th century, in Peru, the indigenous populations were resettled in the so-called "towns of Indians" or "reductions" created by Viceroy Toledo.

These resettlement policies forcefully evicted the local population from their villages and hamlets and concentrated them in new settlements, built following the colonial grid layout. A central square surrounded by buildings representing the colonial institutions, namely a church, the town hall, the jail and the *curaca's* (chieftain) house (Saito, Rosas, 2017).

In Sondondo Valley, instead of a radical displacement, the people resettled around the old pre-Hispanic populated centers. They moved to nearby and preferably flat lands, that were more amenable the grid layout of the new towns and reductions.



Figure 11. Rural tissue within the urban layout in South Cabana.

Another remarkable and noticeable change is that in the urban layouts of most of these towns, in addition to the characteristic grid layout of, rigidly aligned walls and facades. Also, their fabric follows an organic weave of canals, orchards, pens and lush green open spaces. The direct integration of this urban weft and warp to the rural fabric of the farms and the agricultural infrastructure of its surroundings. This results in the re-territorialization triggered by the colonial event, where processes of resistance, negotiation and adaptation were combined with substantially indigenous territorial identity. Similar processes of syncretism in the peculiar imbrication of urban and rural urban tissues have been documented in other villages across the Andean region (Viñuales, Gutiérrez, 2014).

2.3 The vernacular architecture

In the fabric of these towns of colonial origin, beyond the indistinct civic or ecclesiastical buildings of their squares, the critical constitutive architectural element is the courtyard house, of deep Mediterranean roots. These houses were successfully introduced in Latin American colonial cities, leaving an indelible imprint that is at the foundation of all national and regional expressions of its architecture. They also translated, locally adapted and reinterpreted intense characteristics of Spanish vernacular architecture (Fisac, 1952; Flores, 1979).

This is the case of Ayacucho's regional architecture, which shares its most distinctive features with the vernacular architecture of the Sondondo Valley. There, the patio houses open towards the interior and to the roofless spaces of their courtyards, orchards and corrals, through corridors or roofed galleries supported by slender wooden pillars rising on traditional carved stone pedestals. These intermediation spaces resolve the immediate integration of the enclosed or more intimate spaces of the dwelling, with the open spaces of the patio, the garden or *chacras* and the corral. Therefore, there is a significant and vital coalescence with the mainly rural activities of their inhabitants.

These spaces allow to take care and protect the vegetables, medicinal plants, fruit trees and seedlings grown there. They also allow the caring of domestic animals and the storing of hides, grains or farm tools of different sorts. Moreover, they are fundamental for providing thermal comfort in the cold nights when they release the heat they accumulated during the days of intense solar radiation characteristic of tropical latitudes.

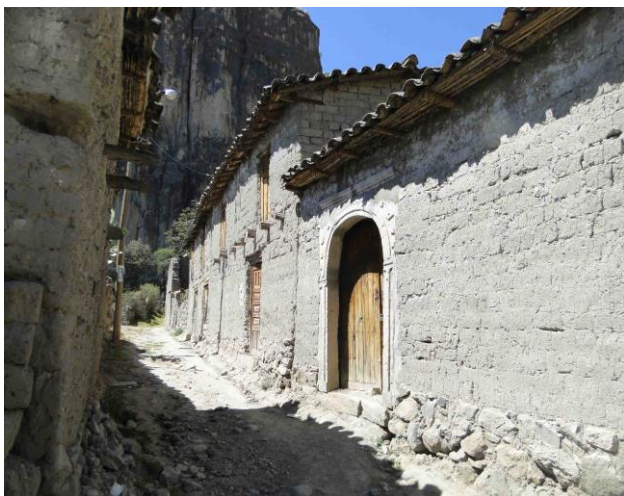


Figure 12. Vernacular architecture in Sondondo town.



Figure 13. Intermediation spaces in a courtyard house, Andamarca.

But these spaces are also of anthropological importance and for people's lifestyles, as they provide the places where families meet and welcome visitors, check weather changes, and enjoy the surrounding landscape.

These spaces of the rural universe within the living habitat extend concentrically. The circles of the small pens inside the houses (for example, for the care of sick or new-born animals, or about to give birth) are at the heart of larger circles around the towns, to finally reach the vast open spaces where herds graze freely.

3. CONCLUSIONS

The project intends to respond to the challenges raised by global models and integrate various efforts to counter the adverse impacts on the valley's cultural landscape. These efforts include research and a cross-scale project, which connects and unifies view and efforts from the standpoint of architecture.

The first thing to preserve in a landscape, built by the Andean communities through their understanding of and intervention in their environment, is the preservation and restoration of their territory and its natural anthropic components and the syncretism of its *apus*. These include: wetlands, corrals, agricultural terraces, networks of roads and canals, carved stones and others.

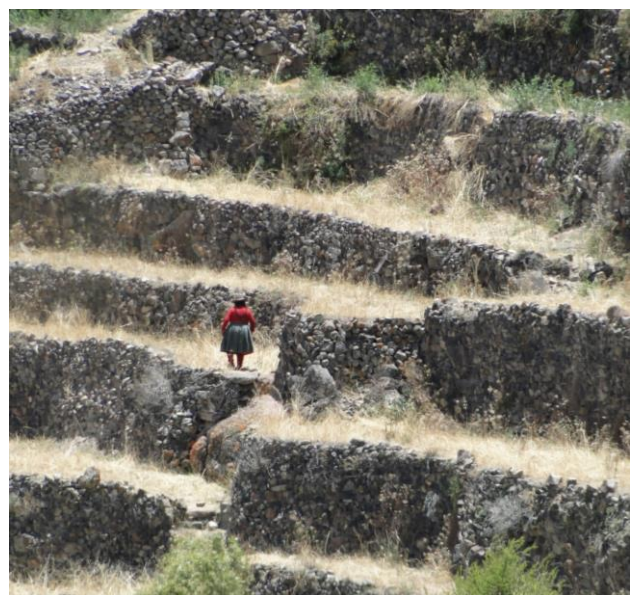


Figure 14. A community woman walks down farming terraces from Inca times.

Towns show how the transformations underway in their original layout and their integration with the rural territory, with the multiple open spaces inside blocks serving as courtyards, orchards or pens, are changing their intense relationship with the environment. Gradual occupation of these areas interferes with sunlight and ventilation, degrading the climatic conditions inside the dwellings and the value of the urban-rural landscape. In this regard, it is necessary to revalue and maintain the open areas, as well as contain the densification of built-up spaces.

The revaluation of vernacular architecture is essential as a germ of intimate and daily living that is intimately related to the landscape. Such architecture, despite its relevance and adaptation to local climates and available resources, is being replaced by new materials and styles considered strange in the local context. They degrade living conditions, destroy the urban-rural landscapes to which they belong, and hamper the cultural identity of the people, and the building of a contemporary identity and way of life rooted in their cultural traditions and territorial context.

This landscape is of enormous cultural and environmental relevance since it is the testimony of the ancestral gradual construction and understanding of a complex environment. Therefore, its identification, analysis, understanding and categorization is the first step towards its preservation and future proposals.

REFERENCES

- Canziani, J., 2007. Paisajes culturales y desarrollo territorial en los Andes. *Cuaderno de Arquitectura y Ciudad de la Pontificia Universidad Católica del Perú PUCP*, 5, 1-120.
- Canziani, J., 2009: *Ciudad y territorio en los Andes. Contribuciones a la historia del urbanismo prehispánico*. Fondo Editorial de la Pontificia Universidad Católica del Perú PUCP, Lima.
- Canziani, J., 2017. Transformaciones territoriales y modelado del paisaje en el valle del Sondondo. *A10. Paisaje como patrimonio*, 58-67.
- Fisac, M., 1952. *La arquitectura popular española y su valor ante la del futuro*. Ateneo, Madrid.
- Flores, C., 1979. *La España popular: raíces de una arquitectura vernácula*. Aguilar, Madrid.
- Holdridge, L. R., 1967. *Life Zone Ecology*. Tropical Science Center, San José, Costa Rica.
- Onern Oficina Nacional de Evaluación de Recursos Naturales, 1976. *Mapa ecológico del Perú*. ONERN, Lima.
- Saito, A., Rosas, C. Eds., 2017. *Reducciones. La concentración forzada de las poblaciones indígenas en el Virreinato del Perú*. Fondo Editorial de la Pontificia Universidad Católica del Perú PUCP, Lima.
- Schreiber, K., 1993. The Inca Occupation of the Province of Andamarca Lucanas, Peru. *Provincial Inca: Archaeological and Ethnohistorical Assessment of the Impact of the Inca State*, 77-116.
- Schreiber, K., 2000. Los wari en su contexto local: Nasca y Sondondo. *Boletín de Arqueología PUCP*, 4, 425-447.
- Viñuales, G., Gutiérrez, R., 2014. *Historia de los pueblos de indios de Cusco y Apurímac*. Fondo Editorial de la Universidad de Lima, Lima.