

Cultural and Natural Diversity of Northern Chile Traditional Knowledge as a Tool for Sustainability Their Communities

Ronald Andrés Caicedo Garay* – Yocelyn Liliana Pinilla Alaniz**

(*) Parma n°29, Fracc. Acoxpa, Tlalpan. D. F. México. +52 (044) 55-32025631. caicedoarquitecto@gmail.com

(**) Parma n°29, Fracc. Acoxpa, Tlalpan, D. F. México. +52 (044) 55-19084518. pinilla.alaniz@gmail.com

Abstract

Many of the regions with the strongest planet's biodiversity are also areas that are home to most of the world's indigenous peoples. This is the case in rural communities of indigenous origin in northern Chile. This area has a rich cultural and natural heritage product of the joint effort of nature and man.

However, the abandonment of the territory and rural economic development based on the exploitation of non-renewable natural resources threaten this heritage, which makes urgent measures of protection to prevent the loss of cultural and natural diversity in this region and generate alternative sustainable development for rural communities inspired by his ancestral wisdom.

Keys words: Heritage, traditional knowledge, worldview, sustainable.

Contextualization

The complexity and integrity who possess the cultural landscape, understood as a formal and creative manifestation of human action in a given territory, is a dynamic reality, and foremost, the result of the processes that constitute a society and its relationship with the environment. Just this complexity is necessary to arbitrate all appropriate means of identification, protection and management of this heritage under threat of destruction that time, economic development and man hovering over them.

When we talk about cultural heritage must necessarily link with the environment and natural heritage, both concepts share a dependency link each other so closely that the protection and violation of one necessarily affects the other. The inclusion of cultural landscapes as a category of protected areas on the *World Heritage Convention 1992*, invites a revaluation between natural and cultural heritage as a whole.

In Arica and Parinacota region is possible to find these types of heritage; this region is a unique cultural landscape, product of the effort of nature and man, with extreme natural conditions and place that has been the scene of important cultural developments. This territory has a rich cultural and natural heritage product of the joint effort of nature and man. It is an exceptional setting for cultural development between the *Great Pacific Desert* and the high plateau of the *Andes*. Human presence has records of thousands of years, and its vast territory live three floors with a large geographical landscape wealth, home to an ancient culture alive and settlement of a wonderful set of prehispanic heritage buildings and colonial churches¹.

But the abandonment of rural life, the uncontrolled growth of cities and the promotion of mining projects for economic reactivation in the region, makes urgent decisions that allow prepare before a hostile scenario on the heritage.

¹ (Pereira, Moreno, 2011)

In the case of this region, the absence of large-scale mining and its associated industries gives us the opportunity to anticipate, through the investigation and law, a set of measures and rules to ensure the conservation of the countryside and with it preserve cultural heritage that lives on it, walking to promote healthy economic development that does not consume in the short term a major stocks cultural and environmental heritage of northern Chile.

Natural and Cultural Heritage of the Region

The region of *Arica and Parinacota*, home realm of the *Aymara* people in Chile, has an area of 16,898.6 km². This region has three ecological zones with well defined geographical and environmental characteristics themselves². The first are the *Coastal Valleys* located between 0 and 2,000 meters above sea level; followed by the *Foothills* between 2000-3500 meters above sea level; and finally the *Highlands* which reaches 4,500 meters above sea level.

In *Coastal Valleys* and river mouths the climatological stability, due to the ocean and the *Pacific Anticyclone* influence, produces favorable conditions for certain types of grasses and ephemeral grasses that grow in wetter periods, and they bring the seasonal settlement of a large number of migratory birds. As for agriculture, it is possible to find alfalfa and corn, and whole acres of olive trees and other fruit trees. As for the hydrographic characteristics of this area, there is only one surface watercourse with permanent sea arrival, *Lluta River* (image 1). The rest is consumed by the farmers before it flows into the *Pacific*, as is the *San José River* in the valley of *Azapa* and *Codpa River* in the valley of *Chaca*.

Meanwhile, the *Foothills* is an amazing nature reserve over the *Great Pacific Desert* harboring unique species of flora and fauna species, notably Andean deer, *vizcacha* and the red fox (image 2). Their morphology of hills and streams that originate in the *Andes* has been the scene of important cultural developments³, where it is possible grow potatoes, corn and onion, and raise goats and sheep.

The *Highlands*, also called *Titicaca Plateau*, is a plain high with extreme climatic characteristics. It is possible to find three types of native vegetation; *paja brava*, queñoa trees, and *yareta*. These formations are associated wildlife consists of camelids, such as *vicuña* and *guanaco*, pumas, flamingos, condors and *suris*⁴. Agriculture in this area is impossible, but we can find large amounts of traditional cattle *alpacas* and *llamas* (image 3). It also noted for its high landscape value, water bodies *Parinacota*, *Cotacotani* and *Chungará*, *Salar Surire* and volcanoes *Parinacota*, *Pomerape*, *Tacora* and *Guallatire*.

Thanks to this natural context cultural heritage, both tangible and intangible, of the Andean communities of northern Chile is unique in the country, is the legacy that their communities have passed wisely from generation to generation since ancient times, and thanks to the knowledge traditional cultural heritage that exists.

For example, in the region more than 80 churches, chapels and oratories dating from Spanish colony because of the installation of commercial and cultural route *La Plata Potosi* are preserved. This route had its first port of shipment in the port city of *Arica*, and design used for ancestral Andean corridors connecting the coast of the *Pacific Ocean* with the *South American Highlands*. These churches are the result of complex and testimony meeting of European and South American culture and ancestral whole constitutes one of the greatest exponents of the constructive and artistic tradition of Andean culture in the region.

² (Dirección General de Obras Públicas, 2012)

³ (Pereira, Heinsen, Maino, 2012)

⁴ Ídem

Within the heritage of the Andean communities also highlights its rich archaeological heritage; one of its greatest exponents is the Inca Trail, *Qhapac ñam*, commercial and administrative prehispanic path stretching from Colombia to Chile. *Tambos*, cemeteries, farming terraces, *chullpas*, construction stones used as food storage or burial, the *pukaras*, geoglyphs and petroglyphs are other archaeological features that stand out and deserve to be preserved.

The material cultural heritage is manifested not only in its architecture and archeology but also through other artistic expressions such as *alpaca* wool fabric, their pottery and crafts in general. As for intangible cultural heritage concerns include their worldview front of nature, their ancestral language still current, the Andean religion, traditions, food and music (image 4).

The Worldview of the Aymara people

The traditional knowledge of native peoples is based on tangible and intangible values wisely how to leverage the resources provided by nature. Indigenous communities in northern Chile are a living example of these conditions; permanent respect for nature and their correct use in the development of their culture and preserve their heritage. We must recognize that their own ways of understanding the ecology, production practices and knowledge of traditional crafts are indispensable tools for the conservation, management and exploitation of their cultural and natural heritage.

The high vulnerability of indigenous peoples is related to its dependence on the natural environment, so these tools are a viable and competitive economic policies based on mining and mass tourism alternative. For this we need to recover the historical experience of indigenous peoples of northern Chile in order to conserve their culture alive and to preserve their heritage for future generations.

The *Aymara* worldview sanctifies nature on a level of respect for their sacred land. His worldview is based on a deep respect for the environment, space that holds its primary activities such as agriculture and livestock, and its wonderful built heritage. *Aymara* beliefs system is syncretic blend of two strong components; prehispanic indigenous beliefs and the Catholic religion inherited by the Spanish conquistadors.

This people focuses their spirituality on *Pachamama*, mother earth, and puts the water as the essential element of their prayers. His view of life is based on an organization linked to geography, natural cycles and ancestral wisdom⁵.

To the *Aymara* worldview, each member of an ecosystem has a role, regardless of physical considerations of the member⁶. The roles of each element of nature, are not only utilitarian character, clothing, food, medicine and even member of a particular religion, but they go much further, pointing to the plane of complementation, which leads to the *Aymara* see and hear through their *little brothers* *Pachamama* messages, such as the presence of an eagle on the road to indicate good luck traveler, or the presence of flamingos communicate through a message of joy that rain is coming⁷.

The *Aymara* worldview is always based on three elements are closely related to the ecological environment, corresponding to the three biogeographic systems that are in your world: *Arajpacha*, *Manqhapacha* and *Akapacha*. The first is the space representing the intangible, from which the control of the universe, life, health, favors, wealth, blessings and death. The *Manqhapacha* is the world below, where lives the forces of chaos controlled by forces *Arajpacha*. And the last level, *Akapacha* represents

⁵ (Orellana, 2009)

⁶ Idem

⁷ (Pérez, 2012)

this world, lived space. In this system the guardian hills, *Mallkus* or *Achachilas*, contain the protective spirits of the ancestors that gave rise to the community and dominate with their presence at *Marka* or village⁸.

Environmental Issues in the Region

The environmental and cultural crisis we currently reflects an anthropocentric and a sense of superiority of man versus nature vision. This paradigm has brought humanity to overcome the resilience of ecosystems depleting natural resources and damaging its cultural resources. Environmental problems are mainly due to activities, processes and human behaviors that disrupt the natural environment, causing negative impacts on the environment, economy and society whose effects in the medium and long term threaten the ecological and cultural diversity, and quality of life of the entire society.

Chile, and particularly the region of *Arica and Parinacota*, is no stranger to this threat. Currently, the implementation of various projects to exploit natural resources, they would be affecting the natural and cultural heritage of *Aymara* indigenous communities that inhabit the area.

One is the indiscriminate extraction of water and deallocation in the *Lauca National Park*. In 1970 the park was declared *Natural Reserve* by the Chilean state in order to preserve the biodiversity of this area. Its great landscape richness and diversity of flora and fauna made UNESCO declared it as a *Biosphere Reserve* in 1981 and was protected by the *Washington Convention* and *International Convention on the Protection of the World Heritage*⁹. Despite national and international systems of protection mentioned, from 1966 the State of Chile had started pumping flow the lake *Chungará* towards the *Cotacotani* lagoon. The high concentration of salt that these waters have deteriorated the water quality and own land, most of them belonging to indigenous communities in the region used mainly for agriculture.

In this same area two decades later, in June 2010, was disaffected by the state between 5% and 15% of the park, this decision meant to allow mining in the disaffected area of the park by private companies. The reversal of these 43,361 acres of *Lauca National Park*, meant for the country in violation of the commitments made to the *Washington Convention* and the *World Heritage* of the *United Nations* who declared the area as a *World Biosphere Reserve*¹⁰.

Another concern is the current project operation *Minera Quiborax* in Surire. This salar high landscape value, is part of the *Lauca Biosphere Reserve* and its wetlands are protected by the *RAMSAR Convention*. The area also is an *Indigenous Development Area* under Chilean law¹¹. Nevertheless in 1989 the mining was authorized for extraction of borax in that area, this meant deallocation of 4,560 hectares, corresponding to 29% of the area of the Salar. The conflict began when the company goes beyond the limits of extraction extending around the Salar, affecting nesting flamingos and life of the rest of the birds that inhabit the place.

Not only the flora and fauna were affected by these activities, in February 2012 the company was authorized to produce boric acid at the plant *The Eagle*, in the foothills of the region. This new activity gravely affected indigenous communities living in the region, the operation of the company in a protected area and indigenous territory, was producing significant contamination from the production of boric acid in water channels used ancestrally by these communities.

⁸ Ídem

⁹ (Instituto Nacional de Derechos Humanos, 2012)

¹⁰ Ídem

¹¹ Ídem

Sociocultural Issues in the Region

While social issues affecting the region are varied and complex, the migration of rural population to the city and the loss of cultural identity of the Andean communities, are the most influential in relation to the conservation of natural and cultural heritage of the region.

The region, like other rural areas of Chile, suffers from a constant migration of the rural population to urban areas. While this process begins in the sixteenth century with the founding of *Arica*, the main urban center of the region, is the mid-twentieth century with the industrialization of the city that migration intensifies, leaving abandoning large tracts of rural land. Currently many of the factories that provided jobs during the second half of the twentieth century are closed, leaving uncertainty and poverty in a large number of families of indigenous origin. Since there is in rural areas not an offer of steady work, and less sustainable development initiatives related to traditional production, these families insist on staying in the city losing all contact with their home villages. This puts at risk the preservation of their cultural heritage, both tangible and intangible. Abandonment is one of the most aggressive agents and costly to reverse risk. However, some of the Andean communities are organized, and each religious holiday return to their villages and churches to celebrate their patron saints. But this was not enough.

Reflexions

While there is a regulatory framework at both international and national levels to protect the natural and cultural heritage, and recognizes the importance of the worldview that indigenous peoples have with respect to biodiversity and the environment in which they live, the economic pressure generated by the mining in Chile weakens these legal instruments.

Responsibly for the conservation of natural and cultural heritage of northern Chile is essential to have clarity of environmental and social issues affecting the territory. Along with this, consider the ancient wisdom of the Andean communities as a guideline to propose solutions. This recognition and these rights are necessary and suitable mechanisms for the protection and preservation of cultural and natural heritage of Chile, and the sustainable development of their communities.

The traditional knowledge of native peoples is based on tangible and intangible values wisely how to leverage the resources provided by nature without destruction and depletion. Indigenous communities in northern Chile are a living example of these conditions; permanent nature and its proper use in the development of their culture and respect their heritage conservation. Nevertheless, the high vulnerability of indigenous peoples in Chile is a pending issue, so we need to recover the historical experience of indigenous peoples to preserve and keep their culture alive and to preserve their heritage for future generations from public policy to consider the heritage resource as a tool for sustainable development.

The environmental protection and heritage conservation should be an important issue on the political agenda of any country. Chile, like many Latin American countries, has the ancestral wisdom of prehispanic peoples who have achieved a high cultural development in permanent balance with nature. This link and worldview that indigenous peoples have achieved front of their environment must be central to the design of a policy and legislative plan of conservation and protection of important cultural and natural heritage of the region.

This requires effective institutions capable of generating real politics to protect and preserve required, need to be strengthened at the local level, agencies directly related to the threatened territories. The rural municipalities of the region are especially called to protect and conserve its resources, its history and identity. It is necessary to concentrate our efforts in the investigation and development of legal tools and traditional knowledge to protect and preserve the full value of great cultural historical, cultural and

natural heritage of this region. The region of *Arica and Parinacota* is ideal for design and implementation of preventive and innovative public policies for sustainable development and that in the hands of local governments allow safe from any involvement in this cultural rich sparsely populated territory and natural resources and environment , which to this day has been incredibly preserved by the communities of *Aymara* ancestral origin that still inhabit this area.

Bibliography

Calogero Santoro. 2000. *Culturas del desierto Chileno*. Arica, Chile. Universidad de Tarapacá.

ISBN: 9567021058

Dirección General De Obras Públicas. 2012. *Guía de Antecedentes Territoriales y Culturales de los Pueblos Indígenas de Chile*. Santiago, Chile. Gobierno de Chile. pp 9.

Henríquez Miriam. 2005. Los pueblos indígenas y su reconocimiento constitucional pendiente. *Reforma Constitucional, 2005*. Stgo, Chile. Ed. LexisNexis. pp. 127-145.

ISBN: 9789562385930

Instituto Nacional de Derechos Humanos. 2012. *Mapa de conflictos socio ambientales en Chile*. Santiago, Chile. pp 10-13, 18, 19.

Lassalle Ana Maria. 2008. Esta tierra que somos. Guatraché 1908- 2008. *De Memoria, Centenario y Patrimonio, 2008*. Buenos Aires, Argentina. Ed. Miño y Dávila. pp 576. **ISBN:** 8496571754

Orellana F., Morelia M. 2006. Murmullo de agua: Colegio Técnico Experimental Aymara en Putre. Agro-ganadero / turismo-patrimonio. *Revista de Urbanismo n°15, 2006*. Stgo, Chile. Facultad de Arquitectura y Urbanismo, Universidad de Chile. **ISSN:** 07175051

Pereira Magdalena, Heinsen Cristian, Maino Javiera. 2012. *Iglesias Andinas de Arica y Parinacota. La huellas de la Ruta de la Plata*. Santiago, Chile. Fundación Altiplano. pp 25, 28, 33, 34, 40.

ISBN: 9789569221002

Pererira Magdalena, Moreno Rodrigo. 2011. *Arica y Parinacota: La Iglesia en la Ruta de la Plata*. Santiago, Chile. Ed. Altazor. pp 133. **ISBN:** 9567472912

Pérez Vilma. 2012. Educación Ambiental y Cosmovisión de los Pueblos Originarios. *Sistema Nacional de Información Ambiental, 2012*. Región de Tarapacá, Chile. Unidad de Cultura Ambiental, CONAMA.

Supanta A, Flores E. 2003. Nuestro Pueblo Aymara del Norte de Chile. *Manual de Patrimonio Natural y Cultural de Arica y Parinacota, 2003*. Stgo, Chile. Consejo de Monumentos. pp. 139-146



Image 1. Lluta Valley. Arica and Parinacota. Chile. Source: Own.



Image 2. Taruca or Andean deer. Foothills of Arica and Parinacota. Chile. Source: Own.



Image 3. Cattle alpacas and llamas. Highlands of Arica and Parinacota. Chile. Source: Own.



Image 4. Traditional celebration in Guañacagua. Codpa Valley. Arica and Parinacota. Chile. Source: Own