



AN ANTHROPOLOGICAL ANALYSIS: IN DEFENSE OF WATER BASED ON INDIGENOUS EXPERIENCES IN THE BOLIVIAN ANDES

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ABSTRACT | **Objective:** This article aims to present an in-depth analysis of the documentary “Uma Uñjirinaka – Cuidador del agua “ (One Uñjirinaka – Caretaker of the Water), screened at the Museum of Ethnography and Folklore (MUSEF) on September 10, 2025, at 2:30 PM, which addresses water contamination by mining companies and draws on the experiences of indigenous people from the Andes region of Bolivia. **Method:** The methodology is aligned with anthropological research that seeks to understand the cultures, social, economic, and political interactions of communities, especially in their local contexts. Theoretical, empirical, and ethnographic bibliographic references were used. **Results:** the documentary highlights specific cases of indigenous communities, such as Alto Milluni, Unidade Educativa Juancito Pinto, and Tiquipa, analyzing their histories, environmental challenges, and community actions. **Discussion:** This article provides a space for analyzing the role of institutions, the formulation of public policies, and social participation in defending water conservation. It emphasizes the importance of a unified strategy that involves the participation of all and respects local culture to protect water resources in Bolivia. Therefore, the documentary advocates for the sustainability of life in Bolivia through water, integrating historical, cultural, ecological, and participatory activism aspects, promoting interaction between academic research, social engagement, and the formulation of sustainable public policies.

KEYWORDS | Bolivia. Sustainability. Activism

RESUMO | **Objetivo:** apresentar uma análise aprofundada do documentário “Uma Uñjirinaka – Cuidador del agua”, exibido no Museu de Etnografia e Folclore (MUSEF) em 10 de setembro de 2025, às 14h30, que aborda a contaminação da água por mineradoras e a partir das experiências indígenas dos Andes na Bolívia. **Método:** A metodologia está alinhada a pesquisa na antropologia que procura entender as culturas, as interações sociais, econômicas e políticas das comunidades, sobretudo, em seus contextos locais. Utilizou-se referências bibliográfica teórica, empírica e etnográfica. **Resultados:** o documentário destaca casos específicos de comunidades indígenas, como Alto Milluni, Unidade Educativa Juancito Pinto e Tiquipa, analisando as suas histórias, desafios ambientais e ações comunitárias. **Discussão:** o artigo proporciona um espaço para a análise do papel das instituições, a formulação de políticas públicas e a participação social na defesa da conservação da água. Enfatiza-se a importância de uma estratégia unificada, que envolva a participação de todos e que respeite a cultura local para proteger os recursos de água na Bolívia. Logo, o documentário defende a sustentabilidade da vida na Bolívia por meio da água, integrando aspectos históricos, culturais, ecológicos e de ativismo participativo, promovendo a interação entre a investigação acadêmica, o engajamento social e a formulação de políticas públicas sustentáveis.

PALAVRAS-CHAVE | Bolívia. Sustentabilidade. Ativismo

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INTRODUCTION

The inclusion of Social Anthropology in the study is justified by the fact that one of its main concerns is understanding how indigenous communities interact with their territories, their worldviews, ancestral practices, and ways of organizing themselves socially in the face of current environmental and social challenges. Thus, the text highlights the sacred connection of Andean communities with water, a crucial element for the cultural survival of the population in all its forms.

The documentary “Uma Uñjirinaka – Cuidador del agua” (An Uñjirinaka – Water Caretaker), directed by anthropologist Carlos Revilla¹, highlights the profound relationship between indigenous communities and their territories, revealing historical, environmental, and social challenges. The screening held at the Museum of Ethnography and Folklore (MUSEF) in 2025 provided an opportunity for reflection on the importance of water protection based on traditional experiences and territorial activism.

Therefore, this article aims to integrate these aspects into an academic analysis that values community participation, the watershed perspective, and research and activism actions that promote sustainability. The text is divided into 1. Introduction; 2. Literature Review; 3. Methodology; 4. Results and Discussion; 5. Conclusion; and 6. Bibliographic References.

LITERATURE REVIEW

Historical and Cultural Context of the Indigenous Communities of the Andes

Indigenous communities, such as Alto Milluni, Tiquipa, and the Juancito Pinto Educational Unit, have a history marked by resistance, exploitation, and cultural resistance. From colonial exploitation at the Milluni Mine, which began in 1920, to the conflicts of 1965, these peoples faced episodes of violence and marginalization, but also of identity strengthening and struggle for their natural resources. The sacred relationship with water, rivers, and territories is central to the indigenous worldview, being a source of life, rituals, and cultural identity. (Documentary 2025).

The emphasis on community involvement, participatory methodologies, and community empowerment reflects the principles of ethnographic research, which prioritizes local knowledge, community voices, and the joint co-construction of solutions. One can mention the methodologies of (Overing 1999), which emphasize the relevance of identifying indigenous epistemologies to understand their interaction with the environment.

1 Carlos Javier Revilla Herrero. **Anthropologist – Universidad Mayor de San Andrés**. Project Officer at the Institute for Research and Action for Integral Development (IIADI) in Bolivia. As a coordinator of national and regional projects in the NGO sector, he has worked for many years on participatory research processes and methodologies and capacity building for the enforceability of rights with various grassroots organizations at the national and regional levels. Since 2012, this work has included studies on the space for civil society participation at local, national, and international levels. His research in the field of political and urban anthropology focuses on themes such as extensive urbanization and socio-ecological inequalities, social movements, and the human rights situation in urban (right to the city) and rural environments. Currently, his interests are centered on the role of mega-infrastructure projects in territorial accumulation processes via extensive urbanization and their impact on the (re)production of socio-ecological inequalities. Access: <https://www.contested-territories.net/carlos-javier-revilla-herrero/> 14/09/2025 at 13:28h.



Additionally, the focus on river basins and territorial management shows a systemic view of space, natural resources, and social agents, a fundamental concept in environmental anthropology and the anthropology of territory, according to (de Castro 2014). This view aligns with the idea that natural resources are not merely objects of exploitation. They have cultural and social value for Andean communities. In this perspective, according to (Haesbaert , 2021, p. 37), “it is very important to emphasize that each culture develops its own conception of time and space and, in some way, produces and moves with it”.

According to Haesbaert (2021), each people possesses its own cultural uniqueness, including the Andean peoples, whose connection to territory and time is deeply rooted in their traditions and worldviews. These communities living in the Andean mountains struggle against mining companies, as the pollution of their rivers, fundamental to their survival and cultural identity, infringes upon this notion of sacred space and socially established time.

However, mining is of central importance to the economy of Potosí, Bolivia, according to (Padilha 2012, p. 13), highlighting its relevance to the survival of the local population:

Of all the countries in Latin America, Bolivia is where artisanal mining has the greatest impact on the labor market. Mining in the Department of Potosí, especially in the city of Potosí, is practically the only productive activity in the area, responsible for the survival of almost all its inhabitants. Recently, the miners of Potosí even mobilized to separate from Bolivia, as they no longer want to pay the majority of taxes to the country and not see their taxes reinvested in improvements; they want to benefit more from the exploitation of their natural resources. (PADILHA 2012, p. 13).

Furthermore, it highlights the miners’ dissatisfaction with the distribution of taxes and benefits received from the State. This circumstance reflects tensions between the use of natural resources and the needs for sustainable development and social justice in the region.

Thus, the worldview and relationship with the environment for the indigenous peoples of the Andes is considered sacred; water is conceived as a sacred and vital element, a view widely discussed by the French anthropologist (Descola 2013), who analyzes the symbolic relationship between traditional peoples and natural resources, emphasizing the relationship of reciprocity, care, and reverence. “I observed, therefore, a world in which, far beyond the relationships between humans, the relationship with the beings of nature played a central role” (Descola, 2013, p. 03).

The initiatives of these communities represent a resistance aimed at preserving their ways of life, reaffirming their autonomy in the face of environmental and cultural threats. Therefore, their protests are not limited solely to environmental degradation. The Andean movement also positions itself against attempts to erase their identities and their history as indigenous peoples.

Regarding community participation and participatory methodologies of the Andean community in demonstrations against mining and river pollution, priority is given to valuing community leadership, even when the other side presents development theory. In this context, (Scot 1998, p. 11) highlights the “forms of knowledge and manipulation characteristic of powerful institutions



with well-defined interests.” Furthermore, he considers the importance of local knowledge and participatory research in understanding and resolving environmental problems.

It is worth highlighting that the vision of water resources is discussed by (Lira; Cândido 2013, p. 17): “it is necessary to integrate projects and activities aimed at promoting the recovery and preservation of the quality and quantity of resources in river basins, as well as the recovery and preservation of springs, water sources and watercourses in urban areas.” Therefore, it points to the need for participatory processes and multiple actors for the sustainable management of water in traditional and urban contexts.

In short, these conflicts demonstrate the importance of recognizing the cultural diversity of time and place in the struggle to protect the Andean environment. Furthermore, confronting mining companies that have government support to access mining areas, impacting the way of life of the territory’s original inhabitants, is arduous. In the rivers, the evidence of contamination is explicit, harming the environment. The struggles of the Andean people are continuous and full of challenges!

Alto Milluni : Memory of exploration and resistance

Milluni Mine , dating back to the 19th century, was a symbol of colonial exploitation that resulted in the deaths of workers and the massacre of miners in 1965. Currently, the community seeks to reclaim its historical memory, promoting sustainable tourism with the “Miner for a Day” route and valuing its cultural heritage. (Documentary 2025).

In Alto Milluni , there is a colonial legacy dating back to 1920, the year in which the English company Fabulosa Mines Ltd. began exploiting the natural resources of the Alto Milluni community without prior consultation with local residents. Due to an order to intervene at the mine to arrest union leaders, several miners were shot and killed . (Documentary 2025).

Milluni Mine cemetery , which was declared by the Municipal Government of El Alto as a historical and cultural heritage site of the city. Currently, the Milluni Mine has become a tourist attraction for the community of Alto Milluni , and with the community’s own initiative, a tourist route called “Miner for a Day” was created. (Documentary 2025).

After 20 years of abandonment of the mine, a group of children of former workers and residents of the community returned and began small-scale operations. The cemetery is the final resting place of miners who were massacred on May 24, 1965, during the dictatorial government of René Barrientos. Ortuno . (Documentary 2025).

In Alto Milluni , there is a mine that bears the same name. At the end of the 19th and beginning of the 20th centuries, the mine was very important for La Paz and Bolivia. There is also the Milluni cemetery , where miners who died at the hands of the military in 1965 are buried. In addition, there is a museum about metallurgy, a dam, and, of course, Mount Huayna Potosí and the ice of the Charquini Glacier . (EL ALTO NEWS, 2025) ².

2 EL ALTO NEWS. Accessed: <https://www.elalto.gob.bo/noticias/?p=26554> 20/09/2025 at 5 PM.



For the Instituto de Investigación Y Acción para el Integrated Development (IIADI 2024) states that mineral exploration by cooperatives contributes to environmental contamination, but the impact is even broader, involving the entire extraction and processing chain. The transfer of processing to distant municipalities, such as Viacha, exacerbates the degradation of water resources in the basins, affecting local communities and Lake Titicaca. Thus:

The mining cooperatives' exploitation methods have been a significant factor in contamination; however, they represent only a portion of the impact of all mining operations carried out over the years. According to local residents, the mineral from both the mines and the tailings is no longer processed directly in the region, but rather in municipalities within the same basin, such as Viacha. This has caused serious impacts on the water quality of the Katari and Pallina rivers, affecting dozens of communities in the lower part of the basin and Lake Titicaca. (RIVELLO, 2024, p. 24).

This activity demonstrates that mining practices often disregard sustainability, transferring environmental impacts to more vulnerable areas. Furthermore, it highlights the importance of integrated policies that address the entire production chain, not just the initial phase of exploration. In short, it underscores the importance of measures aimed at preserving water resources and protecting affected Andean communities.

On October 4th (04/10/2025), an excursion was made to Alto Milluni, where the heroes' cemetery was observed up close; it's impactful to be there!

Furthermore, the social work of the Alto Milluni Women Entrepreneurs was highlighted, which promotes community-based tourism in the Alto Milluni community. The main legal representative is the president, Ms. Estela Poma. The Women Entrepreneurs produce handicrafts based on Andean traditions, thereby generating jobs and income for the Alto Milluni community. Local tourism contributes to the sales of these handicrafts.

Also in Milluni, at the site of the former mining camp, stands a prominent metal sculpture of the Andean Condor, which is part of a project and has become one of the main tourist attractions of Alto Milluni, located at an altitude of 4,200 meters.

In Bolivia, the Andean condor is seen as a national emblem of profound significance, symbolizing an ancestral spirit and a symbolic concept of power, freedom, and longevity. Culturally, this bird symbolizes the connection between the spiritual and material realms, as well as reflecting the grandeur of the Andes and the identity of the Bolivian people.

The condor also plays an important role in Andean mythology and folklore, being a central element in traditional rituals and beliefs. Within the realm of symbolism and culture, the condor holds several relevant meanings, according to popular belief and sacred thought:

— Spiritual connection: In the mythology of the Andean peoples, the condor is believed to act as a messenger connecting the celestial world (Hanan Pacha) to the earthly world (Kay Pacha). It is considered a divine entity representing the future and communication with the gods.



— Representation of power and freedom: for the cultures of the Andean region, the condor is a bird that symbolizes strength, health, and a long life, as well as personifying freedom due to its ability to fly high in the sky.

— Symbol of national identity: as one of the emblems present in the Bolivian coat of arms, the condor reinforces the connection of the Bolivian people with their land and traditions, being a visible expression of their cultural identity.

— Value in Inca tradition: during the Inca Empire period, the condor was considered a sacred bird, highly revered for its spiritual and mythical importance, symbolizing divine aspects of Andean cosmology.

Currently, the condor remains a symbol that evokes Bolivia's ancestral roots, representing the country's cultural heritage. Furthermore, its presence inspires conservation and protection efforts, as the species is threatened with extinction, highlighting the importance of preserving this living symbol of Bolivian culture.

In reality, in its natural habitat, the Andean condor measures 1.20 meters in height and can weigh around 15 kg. When it opens its wings, it can reach a wingspan of 3 meters. It inhabits the mountains of the Andes mountain range, at altitudes of up to 5,500 meters above sea level, in open spaces that facilitate the detection of food ³.

In short, the installation of the condor sculpture in Alto Milluni , District 13, was intended to create a tourist attraction with the majestic Huayna Potosí mountain in the background as a backdrop. The next subtopic, "Uma Uñjirinaka — Cuidador del agua," discusses the Juancito Pinto Educational Unit.

Juancito Pinto Educational Unit : Education and environmental preservation

According to the (Documentary 2025), founded in 2007, the school represents an initiative for social inclusion and environmental education. Students actively participate in projects to restore the Seque River, promoting actions such as waste collection, composting, and reforestation, reinforcing their connection with the territory and indigenous culture.

Juancito Pinto Educational Unit is located in the Department of La Paz, Murillo province, in Municipal District number 14 of the city of El Alto. It was founded on May 15, 2007, to serve the children of migrant families who came from different provinces of La Paz, and these children had nowhere to enroll in school. (Documentary 2025).

In the region, there were only two large schools and no vacancies. For this reason, the Juancito Pinto Educational Unit was created, and 18 years have passed since then. A curious fact: Juancito was 12 years old when he fought against the Chilean invaders—in this case, the drummer boy who was a true fighter. (Documentary 2025).

Analysis reveals the importance of the Juancito Pinto School as a social inclusion and environmental education initiative since its founding in 2007. Students participate in projects that

3 El Cocuy National Natural Park. Access: <https://www.facebook.com/watch/?v=551059049300878> 09/10/2025 at 4:36 PM.



promote the recovery of the Seque River, reflecting a strong connection to the land and indigenous culture. The school was created to serve migrant children in La Paz, who faced difficulties accessing other institutions.

Furthermore, there is a historical mention of Juancito as a young fighter against the Chilean invaders, reinforcing the sense of resistance and local pride. The school, therefore, combines education, cultural preservation, and social engagement throughout its 18 years of existence. The documentary (2025) records statements from community members regarding the water quality in the region, as follows:

the rivers were rivers with clean water, spring water, of these sumaj alsus (pure waters), and therefore, it was once a sacred place. It was a place where huashtas (rituals or offerings) could be performed. In the past, it was known as the Huichucirca Community. We were also neighbors of the Seque Community. The community members used to be able to hunt here. For this reason, it was called the Seque River, because there was an abundance of small fish here. (DOCUMENTARY 2025).

The community's expression reveals the beauty and importance of rivers in their culture and community life, highlighting their connection to spirituality and the relationship with nature. The rivers were considered sacred, places of rituals and contact with the sacred, due to their pure and abundant waters. Furthermore, it demonstrates the historical connection of the inhabitants with their surroundings, through the use of natural resources as a means of survival and cultural identity.

When the land was subdivided, the occupied area grew and expanded, so the entire territory began to change. The owners, when subdividing the land, had to leave a percentage of the land, which was approximately 40% of the total subdivided area, and it was in this roughly 40% that this school was being built. Regarding the environment, in the 1990s, there was a kind of garbage dump in the area. This garbage that came from the city was being dumped into the river. The machines were dumping it into the river, and with that, I believe, the contamination of the Seque River began. (Documentary 2025).

The passage above portrays the impact of urban growth and land subdivision in the region, highlighting the change in the territory and the construction of the school in the available spaces. Furthermore, it highlights the relationship between disordered occupation and environmental issues, especially the contamination of the Seque River. The mention of the landfill and the dumping of garbage into the river shows the negligence towards environmental preservation in the 1990s. This reflection calls for sustainable planning and responsible management of natural resources.

The educational unit is located on the Seque River. And unfortunately, this river is very contaminated. Among the sources of contamination are slaughterhouses, which dump blood, entrails, and waste directly into the river, eventually flowing into Lake Titicaca. Also among these sources of contamination are car washes, large workshops, and machinery, where wastewater is discharged directly into the river. (DOCUMENTARY 2025).



With this evidence, the strong relationship between human activity and the environmental degradation of the Seque River, which also impacts Lake Titicaca, is evident. The presence of slaughterhouses, car washes, and workshops contributes to pollution, jeopardizing the health of the ecosystem and Andean communities. It is essential to act to reduce this contamination and preserve natural resources, as well as to promote more sustainable and responsible practices to preserve these vital environments.

With environmental preservation in mind, the Educational Unit mobilized to collect plastic, PET bottles, and yogurt bags, thereby promoting educational practices and raising awareness in the local community about the importance of being a multiplier of actions favorable to the environment. As a result, community and school mobilization managed to collect various materials, including iron and other types of waste. In addition to awareness campaigns, the school is developing a tree planting project in the school environment, both inside and outside, as shown in the following model.

The Green Corridor stood out for actively involving students in the planning phase, stimulating their creativity and sense of responsibility. The participation of elementary and high school students reinforces the importance of a collaborative and democratic project.

Speaking about what the Green Corridor is, this part was very interesting because it involved the participation of students from both elementary and high school. They thought about and imagined what they would like this educational unit and its surroundings to be like in the future. The Juancito Pinto educational unit, from the fifth-year high school class, worked to create the Green Corridor, in which most of the designs are for parks and a machine to purify the water coming from the river. (DOCUMENTARY 2025).

By envisioning the future of the school and its surroundings, students become the protagonists of the school environment, fostering greater attachment and commitment. Planned tree planting contributes to a more sustainable, beautiful, and welcoming space. Thus, student engagement is essential for the success and effectiveness of the site revitalization project.

The school's commitment to the fight for environmental preservation is evident in the composting initiatives promoted by the institution; it is an essential preventive action for caring for the environment. By transforming organic waste into natural fertilizer, students contribute to reducing waste and preventing environmental pollution.

With the participation of the students, they made a compost in which they placed potato peels and vegetable scraps, thus serving as a fertile fertilizer. First, a layer of sawdust is placed, then a layer of all the fruit and vegetable peels, and after all this procedure everything is mixed, and this serves as fertile fertilizer for all plants. (DOCUMENTARY 2025).

Therefore, this practice teaches the importance of reusing materials and sustainable actions in daily life. Furthermore, it encourages awareness of the natural cycle and the need to preserve natural



resources. The active participation of students strengthens their commitment to and priority of a more natural and healthy environment. Thus, the school acts as a reference in the formation of environmentally responsible citizens.

Furthermore, a nursery was established at the educational unit, which assists in the Green Corridor project, especially regarding tree planting. “We will plant trees to make the air cleaner and purer, as this will be fundamental for our Mother Earth and for taking care of the environment.” (HIGH SCHOOL STUDENTS, 2025). Therefore, as protagonists, the students of the Juacinto Pinto School Unit highlight the importance of tree cultivation as an essential practice for environmental conservation.

Furthermore, they emphasize that trees make the air cleaner and purer, reinforcing the crucial role of plants in improving air quality and ecological balance. Therefore, recognizing the connection between actions and care for “Mother Earth” highlights the collective responsibility to protect the environment. Thus, planting trees is a simple but powerful action that contributes to a more sustainable future. In short, encouraging this practice is essential to ensure a healthy environment for current and future generations. Next, the documentary “Uma Uñjirinaka — Cuidador del agua” discusses the Tiquipa Community.

Tiquipa Community: Traditional Activities and Environmental Impact

Located south of the Andes, Tiquipa maintains traditional agricultural activities such as quinoa cultivation and livestock farming. However, urban growth and the contamination of Lake Titicaca threaten its cultural and environmental survival, highlighting the need for preservation policies based on participatory water resource management. The Community Tiquipa - Pucarani ⁴is located south of the province of Los Andes, in the municipality of Pucarani, sub-central Chojasivi, a central agricultural company in Quiripujo, is located 70 km from the city of La Paz. (DOCUMENTARY 2025).

According to the documentary (2025), in ancient times, in Nayra Pacha, there was a strong presence of the Chiripa culture in the area. It has archaeological sites such as Wila. Quntu, the Incas and their empire, the Inca Empire. In ancient times, in Lake Titicaca, and even today there are still birds in the lake, among them the Tiki. Tikis, from where Tiquipa comes. Thus, due to community migration, some community members migrated to La Paz permanently, and there are cases of others who go and, over time, return.

Economic activities include the cultivation of potatoes, coca, peas, broad beans, and quinoa. In the past, these now-contaminated pampas used to have abundant quinoa, but today it has disappeared and is greatly reduced. There is also livestock farming, with dairy cows. In ancestral times, fishing was the main activity. However, this activity has also disappeared; there is no longer any dedication to it. They worked with a structure of an AILU. Since AILU is also a term, what does it mean? Community, in common, working together.

4 A documentary about Left Hand Rotation. In collaboration with IIADI. With Luis Flores Mendoza, Macario Gutiérrez Amaru and Victoria Lecoña Lecoña. Access: (441) Comunidad Tiquipa - Pucarani [Cutidores del Agua - Uma Uñjirinaka] - YouTube. 09/16/2025 at 9am.



The environment, Lake Titicaca was crystal clear, uncontaminated, without mud, totally healthy and clean. Fishing was a constant activity, and that was the main source of consumption, more so than meat. And now the environmental reality is different. El Alto, as a municipality and city, has also grown enormously. Everything is there—it's all installed: hotels, slaughterhouses, clandestine slaughterhouses, building constructions, sewage, for example. These situations are causing Lake Titicaca to begin to become contaminated.

There is another municipality, the municipality of Piacha. From there originates this dirty, foul-smelling water, carried by the Pallina River. From there, the dry river, the Seque River, carries—during the rainy season—everything to Lake Titicaca, carries the Katari River, and finally flows into what is the Alipajauida River. And this is already a connection to the smaller lake, Lake Titicaca.

The situation is affecting everyone completely. The emergence of the weed, kento, is a problem because it used to be a communal grazing area where everyone grazed. Now it's completely overgrown with kento. It's impossible to cultivate crops in those places anymore.

During the dry season, there is no water, no ice. With this climate change, all of this, the lake is drying up more and more. Lake Titicaca, during these seasons, decreases its level. In the union structure, there is a commission that takes care of the water. According to the documentary (2025), the watering troughs that were provided, for example, need to be cared for, as do the animal watering troughs. "It is necessary to take care of this, so that the animals can drink, can stay hydrated. That is our job." (DOCUMENTARY, 2025).

It's necessary to coordinate the time spent by those responsible for maintaining the drinking fountains, because neither the municipality nor the departmental government has public policies focused on the environment. They lack the awareness that the environment needs to be healthy and clean for humans and animals to also be healthy. We have to start from the ground up. In short, the struggle for environmental conservation in the Tiquipa community brings an important reflection on the connection between culture, environment, and sustainable development, especially in traditional communities like Tiquipa.

The pollution of the lake and the disappearance of species that have always lived there show that we need to act quickly. We need to protect this place, which is very important to our culture and the environment. We must recognize and strengthen the role of the Tiquipa community in the search for sustainable solutions.

Agricultural and fishing practices, which are part of the local identity, are threatened by urban expansion and pollution of Lake Titicaca, thus demonstrating the vulnerability of traditional cultures to the challenges of water conservation and, indeed, the global environment. When public authorities value and give voice to ancestral knowledge to preserve the environment, it will be crucial for the well-being of humanity. Furthermore, it highlights the need for participatory public policies that involve the community in the management of natural resources, promoting a collective awareness of the importance of preservation.



METHODOLOGY

1. Choice and rationale of the research object. The research started with the documentary “Uma Uñjirinaka – Cuidador del agua”, shown at the Museum of Ethnography and Folklore (MUSEF) on September 10, 2025, at 2:30 pm. The documentary addresses the problem of water contamination by mining companies, focusing on the experiences and knowledge of indigenous peoples of the Andes in Bolivia. Thus, to elaborate the article, an anthropological “gaze” (seeing, hearing and writing) was necessary, since the study is also aimed at understanding and analyzing the relationships between indigenous communities, water preservation and the impact of mining activities on the environment and society.
2. Data Collection. With access to the videos, the analysis began with watching the documentary several times, ensuring a thorough understanding of the presented content. During these viewings, detailed records of data relating to the indigenous communities participating in the documentary were made, including social, cultural, and environmental aspects addressed in the object of study (videos).
3. Theoretical bibliographic research and contextualization with empirical knowledge. Following this, an analysis was conducted using searches in academic sources and theoretical bibliographic references available on the internet, especially on Google Scholar and other academic platforms. This research aimed to broaden the understanding of the Bolivian context, the problems of mining and its environmental and social implications, placing the documentary data within a broader and more grounded theoretical perspective.
4. Ethnographic Approach. At this stage, direct contact and interaction with the studied communities are emphasized. To this end, dialogue was established with local residents, valuing their traditional knowledge and their ways of relating to water. Upon arriving in Alto Milluni, the organization of women entrepreneurs was explored, and conversations were held about social movements that also fight for the preservation of water quality and the rights of indigenous communities in Bolivia.
5. Analysis and Production of the Article The data analysis was carried out by integrating the information obtained from the documentary records, the bibliographic references, and the ethnographic observations made. This action allowed for a deeper understanding of the indigenous experiences of the communities studied, contributing to the elaboration of the article “An anthropological analysis: in defense of water based on indigenous experiences in the Bolivian Andes”.
6. Final Considerations. The methodology demonstrates a qualitative, participatory, and contextualized approach, essential for understanding the cultural and environmental dynamics of Andean indigenous communities. The combination of documentary study, theoretical research, and ethnographic method ensured a consistent and well-founded analysis of issues related to water conservation in Bolivia.



RESULTS AND DISCUSSION

At the end of the video presentation, following the participation protocol according to the list, the Director of the Terra Foundation ⁵, Mr. Juan Pablo Chumacero, was invited to speak. In his narrative (Chumacero 2025), he highlights the profound transformation of the Arco area, from a secure relationship with the land and water to a reality marked by disordered growth and social vulnerabilities. The following is the director's speech (Chumacero 2025) at the event:

The Arch of the Gods. What once existed here—and clearly no longer does—was a space where access to land and water was constant and secure. In the last 60 or 70 years, all that security has been lost. The dizzying growth of the city of the Arch, which also expanded, was so rapid that it revealed a process of disorganized, improvised growth marked by tensions and conflicts. Thus, all life that was once safe is now under pressure. The video (documentary) reveals the grandeur, but also the fragility and precariousness of the communities in the face of access to water, land, and even survival. This is also one of the causes of migration: the decision of many families to leave the countryside and natural areas. It is evident that accelerated urban growth has generated initiatives that especially benefit urban centers. Large-scale projects to guarantee urban water supply were carried out without consulting the communities, often denying their existence. Today, many communities continue without access to water and land. There is the expulsion of residents and a prioritization of the urban at the expense of the rural. The construction of aqueducts and development projects directly affects these communities. In addition to scarcity, there is the even more serious problem of contamination: plastic, chemical, and organic waste, as well as livestock, pollute waterways. The situation is critical. The phrase that appears in the video illustrates this well: “Clean water becomes contaminated water.” There is a clear denunciation of the effects of rampant urbanization and the neglect of rural and indigenous territories. This reality must be understood not only from an ecological point of view, but also from a family, political, and social one. The video invites reflection on the complexity of the relationships between urban and rural environments and on the need for integrated actions, from the family to the governmental sectors. Solving this crisis requires education, environmental awareness, effective public policies, and community participation. It is a struggle that begins at home and involves the whole of society. (CHUMACERO 2025).

Chumacero (2025) highlights the loss of traditional security, resulting in the forced migration of rural communities, which increasingly face scarcity and contamination of their water resources. He further denounces the exclusion of local communities from decisions regarding large-scale projects, highlighting socio-environmental inequalities. Moreover, he reinforces the precariousness

⁵ TERRA is a Bolivian non-governmental organization that seeks ideas and proposals to promote the sustainable rural development of indigenous and peasant populations. Access: <https://www.ftierra.org/index.php/tierra?view=article&id=992&catid=8>. 14/09/2025 at 10:45 h.



of living conditions in the face of urban prioritization, aggravated by environmental problems such as water pollution. In short, he invites reflection on the need for integrated actions involving education, public policies, and social participation to reverse these impacts.

The Research, Activism and International Exchange Network

In this context, it is worth highlighting community participation and participatory methodologies aimed at working with communities such as Alto Milluni and Tiquipa, which demonstrate the adoption of participatory methodologies that involve residents in decision-making and the development of sustainable solutions. Horizontal investigation processes and the use of audiovisual resources strengthen social protagonism.

Furthermore, environmental degradation, a complex phenomenon exacerbated by uncontrolled urban growth, river contamination by solid waste, and economic exploitation without sustainable planning by mining companies, is a major problem. The contamination of the Seque River and the impact on Lake Titicaca, along with the presence of illegal dumps, clandestine slaughterhouses, and the disposal of organic and chemical waste, contaminates the water, compromising its quality for consumption by both animals and humans. In this sense, the contamination threatens the health of Andean communities and local biodiversity.

Even with rising temperatures and declining water levels in Lake Titicaca, especially during the dry season, which directly impact water availability, agriculture, and the daily lives of Andean communities, community initiatives are being implemented to address these environmental and social challenges. This highlights the importance of indigenous leadership and environmental education within the community, involving them and prioritizing the planting of seedlings to reforest the area.

Likewise, composting and waste management are also important. All of this promotes care for the local environment and reinforces traditional practices of preserving the environment in which we live. In short, I highlight the excellent initiative of creating green corridors and communal spaces at the Juancito Pinto Educational Unit, aiming to integrate spaces for socializing, leisure, and environmental education, promoting awareness among students and the community in general.

However, community-based and sustainable tourism and the revitalization of the Milluni Mine offer economic alternatives for the Andean people, valuing the historical and cultural memory of the indigenous population. Furthermore, the role of public policies and social participation is fundamental for the preservation of water and indigenous territories. Reality shows that many of these communities still face the absence of specific public policies and on-site monitoring actions.

Thus, the challenges in implementing environmental policies, and the absence of communities in the development, decision-making, and execution of basic sanitation projects, jeopardize their successful implementation. Therefore, strengthening community organizations and the role of schools in citizenship education are essential to promoting environmental and social change for the Andean peoples.



CONCLUSION

The protection of water, based on the experiences of indigenous peoples in the Bolivian Andes, reveals the importance of an integrated, participatory, and culturally sensitive approach. The documentary “Uma Uñjirinaka “ demonstrates that territorial activism, combined with traditional knowledge and community actions, constitutes an effective strategy for ensuring the sustainability of water resources.

The project to exhibit and analyze the documentary involved a network of researchers from different countries and institutions, who participated in exchange visits, such as the work of IIADI (Institute for Research and Dissemination of Water and Territory). This network transcends the academic sphere, promoting activism aimed at changing public policies and raising environmental awareness.

Unlike isolated approaches, the watershed approach recognizes territorial, environmental, and social interconnections. In the case of the Upper Milluni River basin , integrated basin management allows for long-term actions that promote the preservation of water resources and the strengthening of communities. International cooperation, the strengthening of research networks, and community engagement are essential pillars for addressing current environmental and social challenges, promoting fair and sustainable development.

In this context, it is relevant to highlight the importance of community participation and activism networks, essential skills for social transformation and for strengthening local organizations in the pursuit of sustainability, as discussed in the section on research and activism networks at the international level. Therefore, it is important to focus on the relationship between people and the environment, recognizing water as a cultural, spiritual, and vital element, and not only as a natural resource.

This study, from an anthropological perspective, highlights the cultural, social, and environmental experiences of Andean communities in Bolivia. Beyond showcasing life experiences, the history of community struggles and cultural resistance, the sacred relationship with water, traditional practices, and social participation, the study demonstrates local complexity and its connection to global environmental challenges. Therefore, the multidisciplinary and participatory approach reinforces the need to recognize indigenous epistemologies and promote collaborative environmental management processes, aligning with the theoretical and methodological demands of anthropological study.

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