

# MEANINGS OF WATER FOR THE FAKCHA LLAKTA INDIGENOUS COMMUNITY OF OTAVALO, ECUADOR

---

CARMEN AMELIA TRUJILLO<sup>1</sup>  
JOSÉ ALÍ MONCADA RANGEL<sup>2</sup>  
JESÚS RAMÓN ARANGUREN CARRERA<sup>3</sup>  
KENNEDY ROLANDO LOMAS TAPIA<sup>4</sup>

## Introduction

Water is an integrative vital element, surrounding which humans have woven multiple meanings throughout various historical processes. Each human group possesses a water “culture”, represented by a system of material and immaterial symbols, which are the reflection of social constructs made by the inhabitants of a region.

Every nation, town, or community has different mechanisms of interacting with water systems. In this regard, one can speak of a model in which the human groups adapt to water conduct, and another in which the watercourses are subjected to a specific cultural rationality (SKEWES *et al.*, 2012). These diverse strategies generate different water “cultures”, supported by local ecological knowledge, which manifest in forms of use and exploitation of the resource.

Since ancient times, indigenous people in the Andean zone have valued water from different perspectives. This plurality in forms of valuation and use includes the consideration of water as a deity and object of worship, as an element of worldview, as the basis of productive systems, and as a therapeutic and healing element (LIMON OLVERA, 2006; SILVA *et al.*, 2008; ROBLES MENDOZA, 2010; LEON, 2011; SANCHEZ GARRAFA, 2014; CÁCERES, 2015).

In Ecuador, there is ample archaeological evidence of water conduction in pre-Columbian times, especially for agricultural (irrigation), urban, ritual, and therapeutic uses (CÁCERES, 2002, FRESCO, 2003). Irrigation systems with a hierarchical structure of primary, secondary, and branching canals and ditches, located throughout the country, are noteworthy. These systems, designed to compliment nature and benefit its

---

1. PhD in Environmental Education. BS in Biology and Chemistry. Postgraduate Professor at Universidad Técnica del Norte. E-mail: catrujillo@utn.edu.ec

2. PhD in Sustainable Development. BA in Education, Biological Sciences Focus. Postgraduate Professor at Universidad Técnica del Norte. E-mail: jmoncada@utn.edu.ec

3. PhD in Education. Professor of Natural Sciences at Universidad Técnica del Norte. E-mail: jaranguren@utn.edu.ec

4. PhD in Environmental Education. BA in Education, Social Sciences Focus. Postgraduate Professor at Universidad Técnica del Norte. E-mail: krlomas@utn.edu.ec

communities, are examples of social, structural, and environmental order, as well as a respect for nature, and the intrinsic and extrinsic value that pre-Columbian cultures held regarding water.

However, these forms of use have been changing as a consequence of the emergence and assimilation of foreign cultural elements and the erosion or fragmentation of traditional, local knowledge systems (REHBEIN, 2012). In this setting, the need emerges to understand the current conception and use of water, for the purpose of taking these aspects into consideration when modeling sustainable uses of the resource.

The study of the meanings of water implies understanding the behavior of people in their own environmental context. It is necessary to examine the structures and community systems involved in events related with water, in which traditional, local knowledge is represented. This interpretation arises from the ensemble of expressions, perceptions, memories, actions, languages, and feelings instilled in the everyday reality of the people, products of a permanent and conscious, sociocultural process.

In Latin America, several studies have been carried out, which, under a qualitative perspective and with an interdisciplinary approach, have generated guidelines for sustainable water use. These studies have focused on the meanings of watersheds (AJA ESLAVA, 2010; MUÑIZ, 2002; RETAMAL, *et al.*, 2012; REHBEIN, 2012), the Andean wetlands (MONCADA, 2011), and rivers (CANELON, 2008). All of these studies propose opening knowledge dialogues (LEFF, 2013), integrating traditional understandings and experience—based on immersion in local, daily life—with the technical, academic knowledge related to the sustainable management of water.

The purpose of this study is to reveal the meanings that water has for the indigenous community of Fakcha Llakta of Otavalo, Ecuador, in order to derive orientations for sustainable use of the resource.

## Context

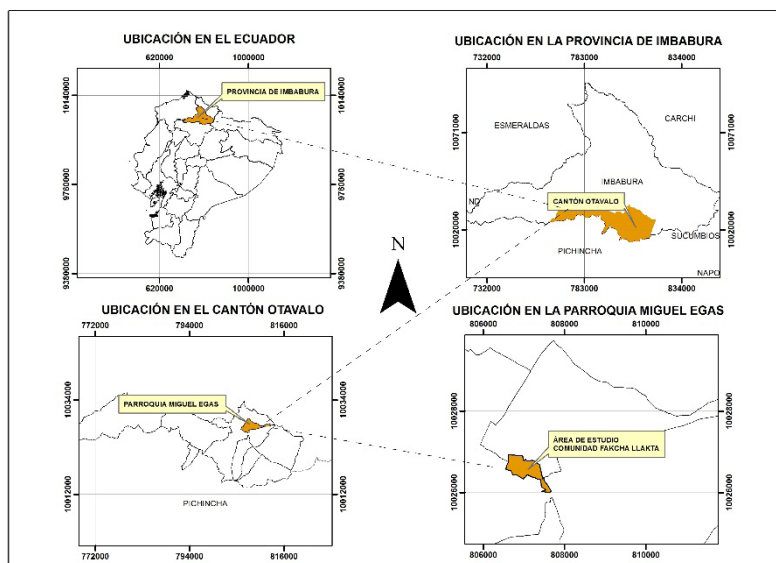
The Fakcha Llakta community is located in Peguche, within the parish of Dr. Miguel Egas Cabezas, in the canton of Otavalo, in the province of Imbabura, Ecuador (Image 1).

The Fakcha Llakta community is a village of *Kichwa* origin, whose structure is that of a commune. The main pursuit of the community is tourism, although the people also cultivate small farms (*chakras*) using long-established, agro-ecological techniques to grow food, medicinal plants, fruit, and timber.

The village sits inside the demarcation of the Peguche Waterfall Protected Forest (BPCP). This reserve occupies 39.84 hectares (GOBIERNO AUTÓNOMO DESCENTRALIZADO DE OTAVALO, 2015), at an approximate altitude of 2,554 meters above sea level. The former National Forestry Institute (INEFAN)—today, Ecuador's Environmental Ministry (MAE)—legally protected the forest in 1994.

The topography of the area is irregular, ranging from hills to steep gorges. The soil lacks rocks, making it easier to farm and irrigate. The local temperature varies between 6 and 18°C, with an average annual precipitation of 1,000 mm.

Image 1. Geographical Location of the Fakcha Llakta Community, Otavalo, Ecuador



The higher part of the BPCP includes Lake San Pablo, waters from which form the opening of Peguche River. This lotic system, after traversing several different communities, constitutes the Peguche Waterfall, with an approximate height of 19 meters (CHAVEZ, 1978). From the falls originates the Jatunyaku River, which crosses the BPCP—its water being used for human consumption, irrigation for local agriculture, and as a tourist attraction (TRUJILLO y LOMAS, 2014).

Peguche Waterfall holds important historical and cultural value. It was the site of one of the first civilizations of Ecuador, the *Carangues* (ESPINOSA, 1988), who frequented the falls for the purpose of worshipping and giving thanks to the water—specifically the notion of female fertility—giving it the name “*Angapaccha*” (CAILLAVET, 2000). This term in the Kichwa language comes from the male-female anthroponymical “*ango/a*”, which means “sir/madam”, endowed with political power or hierarchical command. In current Kichwa, it means “hard”, “strong”, “powerful”, “rude”, or “tireless”; and “*paccha*” means “waterfall”.

*Angapaccha*, with the female ending, means “powerful waterfall”, or “lady waterfall”. This compound term pays homage to what before the Inca conquest was a sacred site, aligned with the original town of Otavalo, built on the shores of Lake San Pablo (then *Imbacocha*), where a sacred temple was located (ESPINOSA, Op. cit.).

This sacred connotation entails a deep reflection on the ideology of deities in which the ancient civilizations worshipped water, anchored to the masculine-feminine duality and the sense of reciprocity in terms of giving and receiving. Peguche Waterfall constituted a hub of spiritual energy, where only the *Carangue* males could bathe in order to acquire strength and virility when giving an offering to the waterfall.

This custom is maintained in certain festivals related to the cultivation and harvesting of maize (*Raymicunas*) and other traditional indigenous celebrations of the Northern Andes of Ecuador. *Inty Raimy*, or Festival of the Sun, has the most significance in terms of the integration of indigenous *yachaks* (people of ancestral knowledge) and *mestizos* (people of mixed origins) who gather to the waterfall to bathe at midnight, with the purpose of acquiring energy, both physical and spiritual.

Today, the area is a well-known tourist destination of the Otavalo canton, with a high influx of visitors—both national and foreign. Among the main reasons for which tourists visit the area (TRUJILLO *et al.*, 2014), is the spectacle of the waterfall, the waterholes, the Inca baths, and the landscape—all water-related attractions.

## Methods

Within the Fakcha Llakta community and the BPCP protected forest, converge natural, historical, sociocultural, and economic elements, framed in the experience of the *Kichwa* Otavalans, who, in turn, add a complex human reality—one that is “created, changing, dynamic, holistic, and multifaceted” (GURDÍAN-FERNANDEZ, 2007, p. 66, translated from the Spanish). The direct interaction of the researcher and those being researched was required in order to generate a comprehensive vision of this “complex system of reality” (GONZÁLEZ-REY, 2006, p. 10, translated from the Spanish). This specific set of factors is addressed by gathering implicit and explicit answers, generated by subjects in daily life (MATURANA, 2009, BERGER and LUCKMANN, 2008).

This qualitative study was oriented by the socio-constructionist paradigm (GERGEN, 1996; IBÁÑEZ, 2003), which constitutes the construction of knowledge based on the discursive capacity of subjects, emphasizing the multiplicity of possible and valid perspectives on reality, and giving language a vital importance within the relational-social process. The vision of this theoretical movement is that reality is built socially (BERGER and LUCKMANN, 2008), which implies assuming the social world as a collection of meanings built through dialogic communication in a given time and space.

Regarding this type of approach, Morse (1994) emphasizes the importance of the researcher’s immersion in the life and culture of the social group with which the research is undertaken. By sharing the lives of the other, the ethnography leads to an intentional and relational-tactical work, where common sense emerges and social feeling is internalized by actively integrating into the community life of a social or ethnic group with unique and diverse characteristics.

The information was compiled between 2013 and 2015, through three techniques: participant observation, in-depth interviews, and the collection of cultural objects linked to water.

Nine in-depth interviews were applied to different members of the community. These were selected intentionally, ensuring gender equity and the representativeness of various social sectors, including: a housewife, two shamans, a farmer, a tour guide, a drinking water commissioner, an artisan, a teacher, and a forest ranger. In all cases, the subjects had informed consent to participate in the research.

The interviews were conducted by a group of three researchers. They started with a trigger question: *What does water mean to you?* From the answers given, the conversations were aimed at discovering uses of water, forms of valuation, problems, and alternatives for managing the resource.

The information was recorded in videos, field books, photographs, and by the collection of tangible and intangible cultural objects (handicrafts, textiles, community publications, rituals, and altar elements). The content analysis of this information resulted in expressions of significance (GONZÁLEZ-REY, 2006)—or categories (MARTÍNEZ, 1986)—that account for the various meanings of water in the community of Fakcha Llakta.

## Meanings of water

The meanings of water for the Fakcha Llakta community have been organized into four elements, which reappear in discourse, cultural products, and social relations, and represent the different ways of conceiving and acting towards this resource. The elements are the following: *vital and sacred; diversity of uses and incalculable value; a threatened natural resource; and sustainability of water from an ancestral perspective.*

### Vital and Sacred

For the indigenous people of Fakcha Llakta, water is considered a living being that guarantees *sumak kawsay*, or “the good life”. These attributes give water a divine and mystical connotation, and personify it as a being to be thanked and cared for.

**Water as a Living Being.** *The first emerging meaning was the notion that water is alive or lifelike. Some expressions that accounted for this idea were:*

*Water from our cultural point of view, from our vision, is our mother; also, it is a brother, sister, and we take care of it that way (Subject 6).*

So, before curing people, I ask permission, to the water, to the hill, to the plants, because they are alive! (Subject 2)

These affirmations have a connotation of human familiarity—perceiving water as a mother, a member of the family that is alive and deserves good treatment. In this sense, León (2011, p. 19) emphasizes that, in Andean indigenous epistemology, everything that exists in this world has a life or spirit: “*Water is Yaku Mama (mother water). In the Kichwa culture, there is not a word that refers to a natural resource as inert mineral ... everything that exists in nature is alive ... and loved*” (translated from the Spanish).

Tatzo and Rodríguez (1998, p. 47) also contribute to this concept, by manifesting that, for the Andean being, “Water is not a lifeless object ... It is a living being ... that presents itself in different forms and ... behaviors. The use of water is based on the

relationship between two living beings: the human being and water” (translated from the Spanish).

**Origin of Life.** For the indigenous Otavalans of Fakcha Llakta, life has its origin in water:

*Within the water, living beings are forming, and that is why, in this world, we cannot live without water ... Water is the main life source of the human body ... (Subject 2).*

*Not only humans, but the animals as well ... they are grown in the belly; in a water source... they grow, and feed. Through the water we also breathe inside our mother! (Subject 2)*

For natives of the Andes, water is associated with the blood of Mother Earth or *Pachamama*, which flows to give life, as in the womb of a mother, and is considered *Yacu Mama*, or “mother water”. In this regard, it is appropriate to consider what was expressed by Cáceres (2002), who showed that, in Andean myths, water gives rise to all living beings, including *runas* (indigenous people) and animals like alpacas, llamas, vicuñas, and guanacos.

**A Sacred Symbol.** Water is conceived as a sacred element and a divine substance, so it is respected and appreciated. The following testimony supports this perspective:

*Water is a sacred being for me, because it is the bosom of our Mother Earth, of my mother, of Pachamama, which is my mother, which brought me to the world, because all the powers, everything, the food, is given to me by my Mother Earth! So, it's sacred to me, it comes from Mother Earth, and if not, where does it come from? Where else do you see water coming out? (Subject 2)*

This vital liquid has always been revered in Andean indigenous cultures, as evidenced in various studies (ROBLES MENDOZA, 2010, CACERES, 2015; LIMON OLVERA, 2006), deemed a divine being, product of the fertilization of the god *Wiracocha* with the Mother Earth, or *Pachamama*. For these cultures, “rivers, lakes, lagoons, waterfalls, and water sources have a divine spirit; therefore, they are divinities” (SILVA *et al.*, 2008, p. 30, translated from the Spanish).

This spiritual configuration in different bodies of water gives sense and attitude to a set of “beings” that relate with humanity. It implies a deep ethical attitude in the Andean vision: the sacredness of water is a principle that should guide the practices of sustainability, reflecting substantial conservation of nature and the different forms of life.

The sacredness of water is present in the lives of the inhabitants and is part of the Andean social reality expressed the motto: “Thus we think and live, the *runas* of the Ecuadorian Highlands” (SÁNCHEZ GARRAFA, 2014, translated from the Spanish). Water is the guiding force, the source of life across generations, and in turn, the main focus of various celebrations and indigenous life.

**Gratitude toward Water.** There is a sense of gratitude among the indigenous people of Fakcha Llakta for the benefits that water generates. One of the testimonies underpinning this statement is the following:

Water is a natural element that always gives us positive energy in this natural environment. I use an internal petition; because water... for us is like a person, a supernatural element! That's why we practice duality, in which you give me life and energy, and I also have to take care of you (Subject 6).

This discourse shows a way of looking at nature—no longer as something that provides and protects everything—that is to say, life—but rather, as a sensitive being that also requires human affection, having us recognize that our personal and social fulfillment is due to the kind presence and actions of nature, which is at the service of the human being.

Coinciding with what was explored by Cáceres (2002), water is conceived as the “container of life” that generates and has its own power, which raises the Andean man and woman, and these in turn, raise the water—they care for it. The protection of this resource is reflected in each of man's actions in agricultural and forestry activities. In this sense, for the Andean being, in water exists reciprocity—giving and receiving converge—which implies giving water the greatest respect, homage, and gratitude.

**Guarantee of Human Wellbeing.** For some Latin countries, the term *wellbeing* has been applied in the constitutional political system, which intends to guarantee the common good of the nation along with its natural assets. In the case of Ecuador, this is called *sumak kawsay*, or “the good life” (ECUADOR, 2008; SECRETARÍA NACIONAL DE PLANIFICACIÓN Y DESARROLLO, 2013).

The following testimony shows the human wellbeing generated by the presence of the water: “*Thanks to this sacred place, we have water for food, water to drink, and water for the swimming pool. We are happy!*” (Subject 5)

Houtart (2013) considers water as a “common good” of vital importance, so it must be approached from a “common scope” to trace the path that will lead to a healthy future, anchored in fair use, management, and conservation of this natural, patrimonial asset. It is a priority to consider water as vital, to be conscious of any benefit it provides, and avoid harming it.

From this first meaning, we see the value in maintaining the traditional knowledge associated with the management of water. Its good use constitutes an act of gratitude for the wellbeing that water provides.

## Diversity of Uses and Value

This category brings together the different uses of water, according to the community: human consumption (food preparation, hydration, personal grooming, maintaining a household), tourism, agricultural and livestock activities, and medicinal and spiritual uses.

**Water for Human Consumption.** In the domestic sense, water has various uses related to food, personal hygiene and maintaining a household:

*Water is for everything, cleaning, washing, for everything! Because we take that water, boil it, let it cool, and drink it normally. It's very good (Subject 1).*

*We use it in everything, in all kinds of things! And, in all kinds of ways! For example: to eat, we need water to prepare food, to bathe... we need water, even for my animals! (Subject 8)*

Here we can see the inescapable presence of water inside the homes of *kichwa*-community families. The subjects interviewed expressed their satisfaction with the availability of water in their daily lives and in the various activities that guarantee wellbeing.

**Necessary for Agriculture.** Agriculture in the Fakcha Llakta community involves a balanced and conscious traditional system, which does not resort to chemicals and avoids water waste during irrigation. Alviar (2002) mentions that this way of cultivating and interacting with the earth leads to a lifestyle which guarantees the wellbeing of the environment and considers it an “active and mobile part of the flow of energy that is life” (p. 16, translated from the Spanish). In support of this concept, inhabitants of Peguche expressed:

*We use the water carefully here ... to cook, to drink, to wash clothes, because everybody needs it. I use water for irrigation, but with care, and for animals and plants as well (Subject 3).*

*Water is for the life we need, for irrigating crops. So, we have sown a few things ... and we need water ... for everything really! For anything we sow ... For life, for plants, without waste (Subject 1).*

**Tourism and Recreation.** One of the main indirect uses of water in the community of Fakcha Llakta is as a tourist attraction. The waterfalls, ravines, and bathing sites are a reason to visit the area, as evidenced by one of the interviewees, stating: “People come to see the first and second waterfall. This is like a tourist magnet ... yes! Quite a lot of people come!” (Subject 3)

Also, the community witnesses the tourists’ satisfaction, in particular, the conservation of the waterfall:

*Tourists come and congratulate us for the waterfall and everything. They are grateful for the fresh air ... The tourists leave happy! That's why I feel good! They buy our handicrafts ... things ... food, and they thank us (Subject 1).*

A truly sustainable tourism is built on this particular environmental culture, in which respect and social responsibility is promoted among all involved, taking advantage of the resources present as a tourist destination.



**Natural Medicine.** Indigenous people have practiced and passed on Andean ethno-medicine throughout their history, to guarantee the health and welfare of their families. Being in constant, direct contact with nature has allowed them to accrue abundant knowledge that, at present, is applied in various fields of naturopathic medicine, such as phytotherapy, hydrotherapy, heliotherapy, and clay therapy, among others.

Many of the components used in natural medicine are found in *wakas*, eminently sacred sites, ceremonial and spiritual centers, the dwelling of spirits or deities (CACHIGUANGO, 2010). For the Fakcha Llakta community, these places are waterfalls, watersheds, Inca pools, and rivers:

*To the tourists, right now, what they like the most is the pool water, medicinal water! I am proud of this medicinal water. My wife had a headache, drank a glass of water from the watershed and her headache was gone! Another lady... from Latacunga came to thank us, the water healed her, and she said it is sacred (Subject 5).*

*I use it for healing; the water has strength, it gives a change of energy! So, in this way I use the water, I give it to a child, and bathe the child in it, and it gets rid of fever, the steam comes out like it does from a pot of corn. I cured a child who was only five days old (Subject 2).*

It should be noted that water is an important part of the Andean indigenous coexistence, especially in a sacred-healing sense. As Burne (2011) argues, “Water is a noble element: it cures the body and the spirit. It is naturally imbued with medicinal powers in thermal and mineral water sources, or it can be made medicinal by means of baths with herbs and other natural ingredients” (p. 70, translated from the Spanish).

**Spiritual Medicine.** Peguche Waterfall has a medical-spiritual connotation and is used for cleansings that carry a series of subjective implications for those who do these activities, sustained in the belief that the water grants health, energy, and power to those who have faith in the forces of nature.

In this regard, Gose (2004) argues that these rituals model cultural-social practices, because they infuse any action with a specific cultural sense. These acts have a specific purpose, directed with such intensity as to achieve the objective. This is evidenced in the testimonies of the indigenous informants of the Fakcha Llakta community.

*Water is used in all rituals, as an element of transition and positive energy, which connects people; the water cleans the negative energies! (Subject 6)*

*Here, we use the water to bathe during Inty Raymi. We swim there in the waterfall and the water does not leave you dirty, because we always clean the ditches and the river every four days (Subject 5).*

Water has a sacred symbolism in the different cultural manifestations of the natives of Fakcha Llakta, whose practices are carried out in the most important Andean festivals called *Raymicunas* (festivities of the gods), in effect during the solstices and equinoxes,

which bring together countless followers of ancestral Andean wisdom (*yachaks* and shamans) and other members of the community, to perform ritual baths for healing purposes of the body and spirit.

*In Inty Raymi, we use it for bathing; In Paucar Raymi, to wash our heads, the Tumarina ceremony, right? In Capac Raymi, that medicinal water ... with herbs ... we give it to the children with bread, which is a ritual; and in the Colla Raymi ... for food, like... in the kitchen. This is a ritual for the women's festival; in these four festivities, water is the main element for rituals (Subject 6).*

Cáceres (2002) mentions that “the therapeutic practices of traditional Andean medicine show the importance of water in healing and cleansing, such that, even the legal and culturally constituted guilds, such as the indigenous federations, take this into account as fact” (p. 102, translated from the Spanish). In Imbabura, there is an association of indigenous sages, legally recognized as *Yachaks de Ilumán*, who practice traditional medicine in waterholes or *ojos de agua* (water “eyes”), lakes, and waterfalls. Older adults of the community attest the spiritual-healing power of water based on their experience and direct observation, passing down this belief as a cultural legacy.

It is important that we highlight the diversity of uses of water by means of educational practices, giving sociocultural relevance to this discourse, making known the concepts of water in the indigenous worldview, in order to ensure conservation over time.

## A Threatened Natural Asset

Despite the importance of water as an essential, natural asset for life, the interviewees of the community of Fakcha Llakta indicated two problems: pollution and scarcity. **Water Pollution.** Some statements made by the community informants that demonstrate the problem of water contamination are:

*Aaaah, the water system! The problem is ... grave I see! It is... in part because of the tourists. Not the international tourists, but the nationals! They eat something and they throw the trash in the river! ... Let's talk about the trash, more than anything! (Subject 8)*

*In Carnaval ... we need to make people aware ... do not waste water! They go with buckets and they throw water at each other, that's the waste. They do not think about the water in time of drought ... it goes down; now, since there is rain, the rainwater is wasted, we do not know how to harvest the water (Subject 3).*

The concern of the interviewees for the alteration of the river water quality, caused—in their opinion—by tourism, is evident. This situation has been corroborated in some studies of river water quality that have been carried out (COLONEL, 2011), and

has always been a concern in the sector, finding few solutions, yet expressing the need to raise awareness in tourists regarding proper waste disposal.

**Water Shortage.** The following comments of the informants of the community of Peguche describe the decrease of the flow of water in the zone:

*Thinking about the future ... Unfortunately, we no longer have enough water, because we're multiplying daily, so that's the first problem (Subject 8).*

*They think that there will always be water ... They don't realize the problem with water, that some want it, others also ... But there is not much (Subject 3).*

A decrease in the amount of water in the waterfall and the river has become evident, due to the number of irrigation ditches and channels cut by surrounding communities, decreasing the flow of these bodies of water. There is a need to focus on educational and community processes to find solutions to a problem that puts at risk a vital resource.

## Water Sustainability from an Ancestral Perspective

Actions to ensure the sustainable use of water fall into the fourth emergent element of the discourse of the informants interviewed. This element can be summarized in three categories: organization and *mingas*; ancestral knowledge and Andean vision; and community environmental education plans.

**Organization and Mingas.** The Andean worldview holds that each person or group must organize in order to strengthen its culture and to stimulate the local economy. Each community has its own organizational forms, expressed in various modalities of family or community groups, and, in many cases, works together to care for natural resources, in this case, water.

*We must gather the people of the community, to support the community and to stand firm! To defend the water, to solve problems ... being separated, we will not be able! Also, to improve the water, we should use more tanks, for more flows, do the necessary paperwork! Be more serious! (Subject 5)*

Community leadership is visible with regards to the management of water. This is a product of the profound sociocultural and spiritual conviction that the Otavalans have toward this element in the environmentally sustainable lifestyle of the indigenous peoples and their tradition of interaction and the exchange of common ideas.

One way to work toward common interests, using knowledge for community purposes, is the *minga*.

The *minga* (or *minka* in Inca Quechua) and the *mita* (provision of services in a rotating and orderly manner) are practices of Inca origin. These are community tasks, performed collectively, that contribute to the sustenance of the people (ROSTWORO-

WSKI, 2014) and promote the physical, emotional, cognitive, and spiritual interests of all participants and the community.

Avemañay (2012) mentions the existence of two types of *minga*: the family *minga* or *uyari*, which in Kichwa means to go and to meet with family for an internal benefit, and, the community *minga* or *wasichi*, which utilizes the workforce of all and for all. This system of local integration begins at the family level, and then includes friends and members of the local or intercommunity (large associations). Therefore, the *nuna* (man or woman) never acts alone, but always collectively, offering a sense of strength and protection, as evidenced by the following testimonies:

*The community itself manages the water, occupies and takes care of the water, and if something happens, we do a minga and we ourselves control the water. Yes, we go out to the minga ... when something is damaged ... a pipe, we all have to go out, children themselves come out, we all have to take care of it (Subject 1).*

Another of the cultural principles practiced within the Andean community and evidenced in the community of Fakcha Llakta is the community meeting and assembly. Community assemblies have a protocol and parliamentary nature, complying with community organizational and legal life, and aimed at ensuring the coexistence of its members in their particular context. This form of integration and participation has different purposes, and decisions are made under the leadership of the indigenous *cabildo* (head of the community).

The value of this type of activity is evident in the following comments by the interviewees:

*One of the strategies is to announce problems in the assemblies and meetings. There we are always talking about water as a vital element, but it is also a very fragile element (Subject 6).*

*As a leader, I would control myself; I would go to see who is wasting; I would call a meeting in that area; I would remind them that we have worked hard, and that we must value the water, and not waste! I would say this to everyone (Subject 1).*

**Ancestral Knowledge that Values Water.** In the context of the Andean indigenous peoples, sustainability implies reconnecting with nature and rediscovering the sacred link with the mountains, rivers, seas, lakes, waterfalls, and wind. Understanding the spirit of each one of them and experiencing the connection with father *Inty* (sun) and *Pachamama* (Mother Earth) (TATZO and RODRÍGUEZ, 1998), allows us to internalize these elements as substantive, making life possible in all its dimensions. The homage to water and the sun, which is celebrated every 21st of June in the *Inty Raymi* festival, demonstrates this connection with nature, in which hundreds gather around Peguche Waterfall, the solar clock, and waterholes in the area:

*The waterfall is powerful because it gives you energy, cleans the body, and gives you strength! That's right! And, they only come to bathe for Inty Raymi! (Subject 1)*

*The children participate in all the rituals of the festival of flowers... in the waterfall, with the help of their parents and tourists. For that, they always keep the watershed clean (Subject 7).*

The indigenous festivities welcome the participation of all, including visitors, who join in this celebration. The festivities begin at midnight on June 21st, where participants, with the guide of the *yachak* (master or wise person), gather around the waterfall to bathe in the midst of ancestral rituals, with the purpose of cleansing the body and mind of negative energies, and acquiring spiritual power through traditional offerings of gratitude to water, to Mother Earth and to the sun. Then, the dance begins for all the communities, in the midst of sacred drinks like *Chicha de Jora* (fermented corn), and other Andean foods that are shared among the dancers.

***Environmental Education and Training.*** Environmental education is a discipline aimed at generating initiatives with a high sense of commitment and action, for sustainable use and enjoyment of the assets of the communities.

Water would be the first aspect to consider, being the basic substance of every system and way of life. Leff (2013) argues that the condition for sustainability is to vindicate the values of cultural diversity, the ecological capacity to sustain resources, and the cultural rationality of each group of people.

In the following quotes from the Peguche community, the above argument is upheld:

*People misuse the water out of lack of knowledge, lack of training, lack of interest. This is usual! It must start in the home ... children, grandchildren ... will follow good advice and share it with more and more people (Subject 3).*

*Water care should be taught with policy such as workshops, conferences by trained people ... to really feel it! Make it visible in the community! But, most importantly, oneself, then the teachers (school), then the others; Politically, from the President, ministries, cantonal authorities, communal awareness, leaders to give that advice within the community ... it's kind of hard for the people, but in a state of need, the people are going to respect that! (Subject 2)*

In these testimonies, we see the importance of environmental training for community leaders, visitors, students, teachers, and community members in general, as a way to contribute to the conservation of heritage values and the construction of a new “water culture”.

Based on the above considerations, the following proposals made by Fakcha Llakta indigenous informants make it possible to further understand the commitment of this

Andean region, eager to know, understand, learn and participate with their families in new topics that enrich their cultural heritage and community environmental learning:

Tell people ... salt water makes up the majority, and only 2% is freshwater. Therefore, we need to make known the reality of water in the world ... Maybe that way people will understand and care ... plant trees, clean rivers ... in schools, knowledge of the environment is advancing ... they teach about water, how to conserve it. It is well stipulated within the educational ministry curriculum (Subject 6).

Formal and non-formal environmental education must promote the conservation of water, and consequently, the conservation of biological, cultural and historical diversity, reinforcing family and social ties in obtaining an environment worthy of living. Educational institutions are the main potential contributor to the development of good practices in inhabitants, having theoretical-practical tools that guide the formation of ideas and participative processes, by means of which communities can reach established goals in relation to water use.

In such a development process, environmental training unites community educational principles, and allows the integration of society and nature as the best way to promote the “understanding of water use on Earth” (ROCCHIO, 2014, translated from the Spanish), and human life.

## Conclusions

The meanings of water in the community of Fakcha Llakta are expressed through four recurring elements: first, it is conceived as a vital liquid that has a sacred connotation and is the guarantor of good living. Secondly, there are a variety of uses of water that include consumption, everyday household activities, irrigation, use as tourist attraction, and therapeutic purposes. All of these practices account for the utilitarian vision of the resource for the purpose of subsistence, on behalf of the community.

The problems with water in the area—principally pollution and scarcity—constituted the third element to be highlighted, which can put at risk local quality of life and the survival of other species.

In the fourth and final element, the proposals of the interviewees were collected to construct a sustainability model for water use. Within this last aspect, the importance of strengthening community organization was emphasized, taking advantage of pre-existing customs of the Andean communities that seek to keep the indigenous families united and alert in the defense of their natural and cultural assets. The practice of meetings and assemblies is transmitted from parents to children, so it is important to safeguard and disseminate, considering the influence this cultural practice has in terms of fellowship, entrepreneurial spirit, sense of belonging to the local community, and social coexistence—key elements for the elaboration and execution of long-term sustainable educational projects.

The findings of this research confirm the notion that indigenous people within the Andean worldview express a deep connection with water in all facets of their lives. These experiences, brought to cultural practice, are social alternatives that orient human attitudes toward achieving good uses of water, based on deep respect and love, which can be translated into actions of incalculable value.

## References

- AJA ESLAVA, L. *Agua, territorio y poder: Representaciones, significados, usos y manejos del agua en la sierra nevada de Santa Marta - Estudio de caso*. 2010. 161 p. Tesis (Maestría en Estudios del Caribe) - Universidad Nacional de Colombia, San Andrés, 2010.
- ALVIAR, J. *Manual agropecuario: tecnologías orgánicas de la granja integral autosuficiente*. Tomo II. Bogotá: Limerin, 2002, 1.191 p.
- AVEMAÑAY, M. *La minga comunitaria del pueblo indígena y su aporte a la educación intercultural bilingüe: estudio de caso del Centro Educativo Comunitario Estanislao Zambrano, comunidad Columbe Grande, cantón Colta, provincia de Chimborazo*. 2012. 108 p. Tesis (Grado en Ciencias de la Educación), Universidad Politécnica Salesiana, Quito, 2012.
- BERGER, P.; LUCKMANN, T. *La construcción social de la realidad*. Buenos Aires: Amorrortu, 2008, 233 p.
- BURNEO, N. *Prácticas culturales vinculadas al agua*. Cuenca, Ecuador: Fundación Museos de la Ciudad, 2011, 77 p.
- CÁCERES, E. *El juicio del agua "Unu Huishu": Simbolismo y significado ecológico del agua en mitos andinos. El milagro de la "Laguna Salada" de Masuq Llaqta*. Quito: Abya-Yala, 2002. 173 p.
- CACERES, E. Significado y simbología del agua. La dimensión terapéutica en el sistema médico de la cultura indígena andina. *El Antoniano*, n.129, p.83-115, 2015.
- CACHIGUANGO, L. *Hatun yachay: principios y fundamentos de la sabiduría andina de sanación*. Quito: Editorial, Abya-Yala e IECTA-Chile 2010. 190 p.
- CANELÓN, J.E. Los bienes comunes. Sentidos producidos sobre el agua en el valle de Quibor, Venezuela. *Espacio abierto, Cuaderno Venezolano de Sociología*, v.17, n.1, p.109-142, 2008.
- CAILLAVET, C. *Etnias del Norte: Etnohistoria e historia de Ecuador*. Quito: Abya -Yala, 2000. 497 p.
- CORONEL, M. Modelo de desarrollo para prevenir la contaminación en la rivera del Río Jatunyacu del Cantón Otavalo. 2011. 94p. Tesis (Diplomado en Investigación) - Universidad Técnica del Norte, Ibarra, Ecuador 2011.
- CHÁVEZ, R. (1978). Sistema hidrográfico del cantón Otavalo. Ecuador. Tesis (Grado en Ciencias Agropecuarias). Universidad Central del Ecuador. Quito-Ecuador. 170 p.

- ECUADOR. *Constitución de la República del Ecuador* (2008). Registro Oficial n°. 449, de 20 de Octubre de 2008.
- ESPINOSA, W. *Los cayambes y carangues: Siglo XV-XVI*. El testimonio de la etnohistoria. Tomo 1. Otavalo: Instituto Otavaleño de Antropología, 1988. 354 p.
- FRESCO, A. Manejo del agua en el antiguo Ecuador. *Revista Española de Antropología Americana*. N. extraordinario, p.245-257, 2003.
- GERGEN, K. *Realidades y relaciones. Aproximaciones a la construcción social* Buenos Aires: Paidós, 1996. 285 p.
- GOBIERNO AUTÓNOMO DESCENTRALIZADO DE OTAVALO. Actualización del Plan de Desarrollo y Ordenamiento Territorial del Cantón Otavalo - Provincia de Imbabura. Otavalo: GADO; CELAEP, 2015. 327 p.
- GOSE, P. (2004). *Aguas mortíferas y cerros hambrientos: ritos agrarios y formación de clases en un pueblo andino*. Quito: Abya-Yala, 2004, 366 p.
- GONZÁLEZ-REY, F. *Investigación cualitativa y subjetividad*. Ciudad de Guatemala: Oficina de Derechos Humanos del Arzobispado de Guatemala 2006, 247 p.
- GURDÍAN-FERNÁNDEZ, A. *El paradigma cualitativo en la investigación socio-educativa*. San José, Costa Rica: Coordinación Educativa y Cultural Centroamericana CECC; Agencia Española de Cooperación Internacional. 2007, 263 p.
- HOUTART, F. *El bien común de la humanidad*. 1era. Edición. Quito: Instituto de Altos Estudios Nacionales IAEN, 2013, 113 p.
- IBÁÑEZ, T. La construcción social del socioconstruccionismo: retrospectiva y perspectivas. *Política y sociedad*, v.40, n.1, p.155-160, 2003.
- LEFF, E. *Racionalidad ambiental: la reapropiación social de la naturaleza*. México D.F.: Editorial Siglo XXI, 2004, 509 p.
- LEÓN, T. *El significado del agua para los nativos andinos y para los profesionales modernos*. México D.F.: Editorial Alfa. 2011, 112 p.
- LIMÓN OLVERA, S. Entidades sagradas y agua en la antigua religión andina. *Latinoamérica. Revista de Estudios Latinoamericanos*, n.43, p.85-111, 2006.
- MARTÍNEZ, M. *El paradigma emergente. Hacia una nueva teoría de la racionalidad científica*. México D.F.: Trillas, 1997, 263 p.
- MATURANA, H. *La realidad: ¿objetiva o construida?*. 2da ed. Barcelona: Editorial An-thropos, 2009. 286 p.
- MONCADA, J.A. Del mito al grifo. Significados de los humedales altoandinos tachirenses para las comunidades locales. *Fermentum*, v.21, n.62, p.329-356, 2011.
- MORSE, J.M. (Ed.) *Asuntos críticos en los métodos de investigación cualitativa*. Medellín: Editorial Universidad de Antioquia, 2003. 447 p.



- MUÑIZ, S. *Los significados del agua y las potencialidades de cambio en la producción agrícola. Reflexiones en torno a la redefinición de la problemática de la cuenca Lerma-Chapala desde Huanámbaro (México)*. 2002. 182 p. Tesis (Grado en Ciencias Ambientales) - Universitat Autònoma de Barcelona, Barcelona, 2002.
- REHBEIN, R. *Las formas del agua. Significado y representación de las aguas en el paisaje sensorial mapuche*. 2012. 158p. Tesis (Maestría en comunicación) - Facultad de Filosofía y Humanidades, Universidad Austral de Chile, Valdivia, 2012.
- RETAMAL, M.R.; ROJAS, J.; PARRA, O. Percepción al cambio climático y a la gestión del agua: aportes de las estrategias metodológicas cualitativas para su comprensión. *Ambiente & Sociedade*, v.14, n.1, p.175-194, 2011.
- ROBLES MENDOZA, R. Sistemas de riego y ritualidad andina en el Valle del Colca. *Revista Española de Antropología Americana*, v.40, n.1, p.197-217, 2010.
- ROCCHIO, D. *Sustentabilidad ambiental: estrategias y proyectos arquitectónicos*. Quito: Corporación para el Desarrollo de la Educación Universitaria, 2014, 72 p.
- ROSTWOROWSKI, M. *Historia del Tahuantinsuyo. Obras completas VIII*. Lima: Instituto de Estudios Peruanos, 2014, 332 p.
- SANCHEZ GARRAFA, R. (2014). *Apus de los cuatro suyus: construcción del mundo en los ciclos mitológicos de las deidades montaña*. Lima: Instituto de Estudios Peruanos, 2014, 360 p.
- SECRETARÍA NACIONAL DE PLANIFICACIÓN Y DESARROLLO. *Plan Nacional del Buen Vivir 2013-2017*. Quito: SENPLADES, 2013.
- SILVA, C. et al. *Agua para la vida: aportes a la construcción de mejores prácticas en el manejo sustentable del agua y la biodiversidad*. Quito: UICN Oficina regional para América del Sur; Agencia Catalana de Cooperación y Desarrollo, 2008. 101 p.
- SKEWES, J.C. et al. Los paisajes del agua: naturaleza e identidad en la cuenca del río Valdivia. *Chungara. Revista de Antropología Chilena*, Vol.44, n.2, 299-312, 2012.
- TATZO, A.; RODRÍGUEZ, G. (1998). *Visión cósmica de los Andes*. 3ra. ed. Quito: Abya-Yala, 1998, 131 p.
- TRUJILLO, C.; LOMAS, R. *Gestión sostenible en turismo comunitario: programas de manejo, interpretación ambiental y senderismo. Caso práctico Cascada de Peguche*. Tulcán: Ediciones DIMEV, 2014. 247 p.
- TRUJILLO, C.; LOMAS, R.; MONCADA, J.A. Estudio del perfil de visitante del bosque protector "Cascada de Peguche". *Tierra Infinita*, n.4, p.20-34, 2014.

Submitted on: 13/05/2016

Accepted on: 17/03/2018

<http://dx.doi.org/10.1590/1809-4422asoc0100r3vu18L1AO>

2018;21:e01003

Original Article



# MEANINGS OF WATER FOR THE FAKCHA LLAKTA INDIGENOUS COMMUNITY OF OTAVALO, ECUADOR

**Abstract:** Water is a multidimensional element for the indigenous communities of the Andean highlands. The Kichwa community Fakcha Llakta, of Otavalo, Ecuador has a close relationship with the existing water bodies in their territory. However, traditional knowledge associated with these resources is fading, giving way to new forms of use. The purpose of this research is to reveal the meanings of water for this indigenous community, in order to propose guidelines for sustainable resource management. It is an ethnographic study with a qualitative approach. The information was collected through in-depth interviews, participant observation by the research team, and the gathering of cultural objects. The findings were organized and sub-grouped according to four recurring elements: vital and sacred; diversity of use and value; a threatened natural resource; and the sustainability of water from the ancestral perspective.

**Resumen:** El agua es un elemento multidimensional para las comunidades indígenas altoandinas. La comunidad kichwa Fakcha Llakta, Otavalo, Ecuador, ha tenido un estrecho vínculo con los cuerpos de agua existentes en su territorio. Sin embargo, los conocimientos tradicionales asociados a estos recursos se están perdiendo, dando paso a nuevas formas de relación. El propósito del trabajo es develar los significados del agua para esta comunidad indígena, a fin de proponer orientaciones para un manejo sustentable del recurso. Es una investigación etnográfica con enfoque cualitativo. La información se recabó mediante entrevistas a profundidad, la observación participante por parte del equipo investigador y la recopilación de productos culturales. Los hallazgos se organizaron en expresiones y categorías agrupadas en cuatro significados: Vital y sagrada; Diversidad de usos y de valor incalculable; Un bien natural amenazado; y Sustentabilidad del agua desde la mirada ancestral.

**Palabras clave:** sustentabilidad del agua, significados del agua, comunidad indígena, etnoecología

**Keywords:** water sustainability, meanings of water, indigenous community, ethnoecology

**Resumo:** A água é um elemento multidimensional para as comunidades indígenas dos Andes elevados. A comunidade Kichwa Fakcha Llakta, Otavalo, Equador, teve uma estreita ligação com as massas de água existentes no seu território. No entanto, o conhecimento tradicional associado a estes recursos está sendo perdido, dando lugar a novas formas de relacionamento. O objetivo deste trabalho é revelar os significados da água para essa comunidade indígena,

e propor diretrizes para a gestão sustentável dos recursos. É uma pesquisa etnográfica, com abordagem qualitativa. A informação foi recolhida através de entrevistas em profundidade, observação participante pela equipe de pesquisa e levantamento de produtos culturais. Os resultados foram organizados em expressões e categorias agrupadas em quatro significados: Vital e sagrado; Diversidade de usos e de valor inestimável; Um bem natural ameaçado; e Sustentabilidade da água a partir do olhar ancestral.

**Palabras chave:** sustentabilidade da água, significados da água, comunidade indígena, etnoecologia

---