

**VIVIR BIEN: INTERCULTURAL AND SPIRITUAL APPROACH TO WATER AND
POWER IN TIME OF CLIMATE CHANGE AND POLITICAL TRANSFORMATION**

by

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ABSTRACT

Climate change and lack of freshwater are a concern for people living in the Andean highlands, *altiplano* of Bolivia. The objectives of this study were to establish a culturally appropriate research approach to study water governance and to identify key political actors and engagement processes related to water governance in Bolivia. A qualitative field study was conducted in the Department of La Paz, Bolivia, in July 2019. In the unique political and social context of Bolivia, particularly if one takes seriously the country's commitment to giving voice to its indigenous people, the governance of water cannot be decoupled from a cultural, and also spiritual, conception of water as Mother; as well as Mother Earth. A current political transformation of public water policies draws from the cultural / spiritual paradigm of *Vivir Bien* which includes a hope and dream for the future in the present. Intercultural engagement reaches ancestral wisdom (*Amawtika science*) through indigenous traditional knowledge and then relates it to western knowledge to coexist in community. These findings can inform a respectful intercultural research and engagement process to address the climate crisis.

Key words: Ancestral wisdom, water governance, *Vivir bien*, climate change

RESUMEN

El cambio climático y la falta de agua dulce son una preocupación para las personas que viven en el altiplano andino de Bolivia. Los objetivos de este estudio fueron establecer un enfoque de investigación culturalmente apropiado para estudiar la gobernabilidad del agua e identificar actores políticos clave y procesos de participación relacionados con la gobernabilidad del agua en Bolivia. Se realizó un estudio de campo cualitativo en el Departamento de La Paz, Bolivia, en julio de 2019. En el contexto político y social único de Bolivia, particularmente si se toma en serio el compromiso del país de dar voz a sus pueblos indígenas, la gobernanza del agua no puede desvincularse de una concepción cultural, y también espiritual, del agua como Madre; así como la Madre Tierra. Una transformación política actual de las políticas públicas del agua se basa en el paradigma cultural/espiritual del *Vivir Bien* que incluye una esperanza y un sueño para el futuro en el presente. El compromiso intercultural alcanza la sabiduría ancestral (ciencia *amawtika*) a través del conocimiento tradicional indígena y luego lo relaciona con el conocimiento occidental para coexistir en comunidad. Estos hallazgos pueden informar un proceso de investigación y compromiso intercultural respetuoso para abordar la crisis climática.

Palabras clave: Sabiduría ancestral, gobernanza del agua, *Vivir bien*, cambio climático.

Introduction

Climate change has put pressure on freshwater use around the world (Vörösmarty et al., 2000). Climate change and lack of freshwater became urgent topics in Bolivia, particularly in 2016, when a critical water shortage occurred in El Alto and La Paz cities. This shortage resulted from a combination of issues related to climate change on the one hand, and water governance on the other hand (Centellas, 2018). In subnational political administrative divisions, such as the Department of La Paz, the Katari River basin and the *Lago Menor del Titicaca* (minor Titicaca Lake)¹, administered by the Ministry of Environment and Water, identified lack of water as a threat (Mmaya, 2010). The Katari River basin and the minor Titicaca Lake are the base of the native Aymara Bolivian people and culture.

Considering the climate crisis on planet Earth, efforts made to understand the needs and the contributions of the Aymara indigenous nation, and to reciprocally and respectfully interchange with their deep-rooted knowledge about water and climate change relations can inform similar exchanges across the globe. This interchange can be understood in context of adaptation to climate change, where adaptation is defined as a heterogeneous process that is influenced by culture as well as by economic and technological development (Adger et al., 2013; Nielsen & Reenberg, 2010). This paper thus seeks to contribute to culturally appropriate climate change research and practice in Bolivia and other highly diverse societies by taking a socio-environmental and participatory approach, one which takes seriously the spiritual connection people have with water and other aspects of nature.

The complexity of water governance in Bolivia entails a multilevel political-administrative structure in coordination with communitarian based indigenous organizations.

¹ Glossary and acronymous tables are presented in complements.

With Bolivia's 2009 Constitution and Mother Earth Law, indigenous social platforms have been developed to address these governance challenges (Estado Plurinacional de Bolivia, 2014; Mmaya, 2010). Prior external analyses of climate change adaptation and environmental governance in Bolivia suggests that there are limitations to the opportunities for engagement across different levels of governance due to difficulties in translating and operationalizing indigenous concepts in government policies related to water and climate change (Zimmerer, 2015). In the response documented here, the first author of this article has endeavored to overcome these limitations and address the complexities of water governance through modeling a community-based approach to climate change adaptation research in Bolivia, led by Bolivians, with a focus on socio-environmental and spiritual dimensions of water and climate change.

In Bolivia, both indigenous organizations and the national government are highly committed to responding to the issue of climate change. Their efforts have included: the first Conference for People and Mother Earth Rights in Cochabamba Bolivia in 2010, in which the first author participated (Klein, 2010; Villavicencio, 2011); the process to develop the Plurinational Climate Change Policy in 2015; and the construction of a social platform with indigenous communities and the Plurinational Mother Earth Authority to address local adaptation strategies for climate change (Mmaya-Apmt, 2018; Villavicencio, 2011). Bolivia has a unique social role in water governance and nature rights at the global scale, as observed by the influence of Bolivian thought and policies related to Mother Earth rights in the United Nations (Argueta Villamar, 2012; Arnaiz-Villena et al., 2005; Camacho Salinas et al., 2015; Villavicencio Calzadilla & Kotzé, 2018; Villavicencio, 2011). The idea of water as a right for life came from Bolivia; today it is accepted globally that water is a human right (CESR, 2010).

Climate change and growing demands on limited freshwater make it likely that the water shortage that occurred in La Paz in 2016 will occur again in Bolivia and in other countries with significant native populations who continue to live in “indigenous” and intercultural knowledge contexts (ontologies)(Agrawal, 1995). In 2016 the worst water crisis in decades occurred, at least since 1992 (Karita, 2016), which changed the way of living and their behavior (Perales Miranda, 2018). Therefore, an exploratory investigation can both contribute to a better understanding of how government and indigenous organizations work together to address the governance of water and climate change in Bolivia, and can provide important insights regarding appropriate research approaches.

Scholars have written about the linkages between the 2016 water shortage and government management. Centellas (2018) identified a link between the water crisis and politics, in the broader context of climate change and political challenges (Centellas, 2018). This study expands that work through in-depth, qualitative field research conducted in 2019, to better understand socio-environmental and spiritual dimensions. If the notion of environment is what is around us – that is, human beings in societies –then we are referring to a something that has three dimensions in a physical context (length, height, and width). If we include the fourth dimension of time (Sauer, 1974), then we begin to move beyond something that can be measured in physical terms. We can also refer to a fifth dimension in terms of consciousness (Yadav, 2010), or sacred time and space – Pachamama - where space is not purely a physical concept and is also a social space or collective understanding of the environment.

In Aymara Quechua understandings, for example, the existence of humanity is explained by Felipe Quispe who indicates that:

“Collectively the human being began to know the environment. Discover the darkness and the light. Discover fire and water. The human being called the entire space

"*Jayapacha*" (Environment) which was separated into "*Alaxpacha*" and "*Manqhapacha*". "*Alaxpacha*" is all space (including the social space), the celestial vault, "*Manqhapacha*" refers to everything of the "Pachamama" (time and space), and everything that is inside it (in this case: Mother earth or planet Earth) (There is also the "*Ch'amakpacha*", the dark places where the sunlight does not shine. These places also have their value, which is the darkness, which is not black, but it is black). All things in the universe and the cosmos are made up of matter. First is the material existence and then the thought which at the same time is the material spirit. The spirit is born on all objects and all matter. There is no spirit of spirit, there is only spirit of matter" (F. Quispe, 1984).

In this view, the multidimensionality of space includes the spiritual or sacred dimension.

Worldwide, indigenous knowledge is an important input to address climate change in highly diverse countries such as Bolivia and in many other countries around the world. Considering that these ancient cultures were established millennia before the current western culture, and are still alive, it is the responsibility of we who remember to respect and honor our ancestral wisdom immersed in indigenous knowledge. In the line of study of Huarachi (2019), the ancestral knowledge of the communities and *ayllus* comes, mainly, from the dialogue and coexistence with the natural environment, which from past times has remained in memory of the people, inherited and transmitted through oral language, symbolic gestures (ceremonies, rituals and signs) and our own life experiences. Traditional indigenous knowledge has been transformed or adapted over time to prevent, reduce and eliminate climate risks, through local strategies, practices and actions (Huarachi, 2019).

Prior studies (Assies, 2003; Garcia et al., 2003; Olivera & Lewis, 2004; Shultz, 2003) explored how the privatization of water did not work in a country where more than half of the people are self-identified as indigenous. The Water War in Bolivia in 2000 established a strong position of the people, mainly indigenous people, against the western neoliberal approach to water governance. The water war basically fore-fronted two positions: the communitarian and the transnational, one rooted in native spirituality and the other economically driven,

respectively. For some, not all, it is a transition from western modern capitalism to Andean spirituality in the Vivir Bien paradigm coexisting with socialism. Politics and spirituality are represented by two staffs in the Sun Gate in the oldest city of the *Abyayala*, Tiwanaku.

Tiwanaku, located at the southern shore of the Titicaca lake, is in the Katari River Basin in the cradle of Aymara people and culture. Some authors such as Posnansky argue that the origin of the American humans is in Tiwanaku (Posnansky, 1945). Aymara social organizations have played a key role in participating in national politics, from a long time ago to the present, and are committed to doing so into the future. The Aymara participate in the contestations in Bolivia as among the most politically powerful of the Bolivian indigenous nations with Andean spirituality (Costas et al., 2019; Ströbele-Gregor, 1996).

In this study, the first author engaged with the Cutusuma Aymara community to talk about water, climate change and power, building on other studies previously conducted in the same community. Cutusuma is in La Paz, Bolivia. The Cutusuma word might come from the word “*Cutu*” neck in Quechua and “*uma*” which means water in Aymara but *Cutu* could be a group of stars, too, in Aymara (Yampara, 2016). Cutusuma is in the department of La Paz, Bolivia in the highlands or “Altiplano” very close to Titicaca Lake. Cutusuma is in the municipality of Batallas in the province Los Andes, two hours by car from the city of El Alto. Gomez (2018) triangulated geospatial information with data recorded by traditional agro-climatic observers (*yapuchiris*) and identified the need for a combination of scientific and local knowledges for agriculture in coordination with the community, local and national institutions. Huarachi (2019) conducted an anthropological study of natural indicators for agricultural risk management. He recommended that the role of *yapuchiris* be strengthened by integrating ancestral science and conventional science. Valenzuela & Caballero (2018) identified cultural

constitutive elements of the *yapuchiri* model in Cutusuma which are: the sense of cultural reaffirmation, management of local knowledge and intercultural circulation of productive knowledge (Gomez, 2018; Huarachi, 2019; Valenzuela & Caballero, 2018). This study extends the intercultural, inter-scientific approach of these past studies, by expanding the scope and scale to explore the relations among water, power and Andean spirituality related to national climatic policies such as *Vivir bien* and Mother Earth Law.

The objectives of this study were to identify culturally appropriate research methods/approaches to study water governance in Bolivia, and to identify the political actors and the engagement processes related to water governance in a cultural context. Specifically, to investigate how these engagements among multilevel governmental actors/indigenous populations affect water governance during lack of water times, or other perceived climate change threats, in the Katari River basin, in the department of La Paz, Bolivia.

This study addressed the following research questions: *What are the intercultural (indigenous /government) processes of engagement today with respect to water governance in Bolivia? What desired outcomes with respect to water and climate change research can researchers, indigenous peoples, and government officials identify together?* To address these questions, Bolivian government officials were engaged at various levels, as were communitarian Aymara people, and non-governmental organizations to interchange and share information related to cultural knowledge of water and dealing with water shortages, and other topics. It is our hope that results from this study will help to increase the capacity of the Plurinational Mother Earth Authority and other institutions in Bolivia to identify the needs of the Aymara people in relation to water and to become more familiar with Aymara socio-environmental and spiritual approaches.

Methods

A qualitative field study was conducted in the Department of La Paz, Bolivia. Interviews were conducted in July 2019, with participants involved in water governance at multiple levels, including community members from the Aymara community of Cutusuma; municipal, department, and national-level authorities; civil society groups and non-governmental organizations, and Bolivian Aymara political philosophers. Interviews were audio recorded, transcribed, and coded, and key themes were analyzed. Methods are described in further detail below.

Study permission

As a field researcher, the first author's initial action was to go to sacred Tiwanaku (>15,000 years old)(Arnaiz-Villena et al., 2005; Marsh, 2019; Yampara, 2016) the oldest city in Bolivia, to ask the deities and local Aymara authorities' permission to open spaces of dialogue. Prior to commencing the study, the first author requested permission via letters sent to the community of Cutusuma; the Ministry of Environment and Water (*Ministerio de Medio Ambiente y agua- MMAYA*); the Plurinational authority of Mother Earth (*Autoridad Plurinacional de la Madre Tierra- APMT*); and the unit of administration of the Katari River Basin and the minor Titicaca lake (Unidad de gestión de la Cuenca Katari y el lago menor del Titicaca-UGCK). Permission was granted in the corresponding letters. The study protocol was approved by the Institutional Review Board (IRB) of Syracuse University. Oral informed consent was received from all the participants; oral consent was deemed to be culturally appropriate. All participants were adults over the age of 18 years, and no identifying information was gathered.

Location

The Plurinational State of Bolivia was selected for this study due to geopolitical importance and geographic location on the continent: the regional interest and that of the Plurinational State in setting limits to colonization based on culture and democracy, where sociocultural coexistence and state policies such as *Vivir Bien* as a civilizing and cultural horizon are closely linked to understandings such as adaptation and resilience to climate change².

Almost two thirds (62.2.%) of Bolivia's population self-identifies as indigenous. The indigenous peoples have power in the government of Bolivia which has identified stopping the climate crisis as a top priority for the survival of not only human beings, but all living beings. Droughts and other risks threaten the population; however, political problems related to climate change are an equal or greater threat (Bjork-James, 2020). High speed political transformation processes occurring in Bolivia are affecting neighboring countries, such as Perú and Chile, related to the development of new constitutions. Geopolitical consequences of the processes of political transformation of climate policies and environmental governance in Bolivia, such as water governance, which is based on a democratic and cultural revolution, are favorable for the purpose of stopping colonization in other countries such as Chile and Peru. Those countries are neighbors of Bolivia with whom not only a democratic vision is shared, but also a millenary cultural heritage. These countries are organizing constituent assemblies to transform their water policies through the enactment of new political constitutions of States.

² Although these last two terms "Adaptation and resilience" are not exactly interpreted as such in the Aymara Quechua culture (that is, in their ethics, epistemologies and ontologies)(Goldman et al., 2018).



Figure 1. Map of Bolivia in South America (right) and an inset map with the location of Cutusuma community near the minor Titicaca Lake (left). Source: Google Earth.

At a national level, the Ministry of Environment and Water (MMAYA) is responsible for water management; the Plurinational Mother Earth Authority (APMT) is responsible for climate change adaptation/mitigation. The Katari River Basin unit of administration (UGCK) is the scale of management for the water in the basin.

Cutusuma is an Aymara community in the Katari River basin that represents the Aymara culture, where there was an opening for the realization of research work. Cutusuma is accessible from the city of La Paz, located just 2 and a half hours away by driving. Transportation services from El Alto city (Terminal interprovincial) to the town Batallas and from there private taxis are available. In Cutusuma other research work had already been carried out (Gomez, 2018; Huarachi, 2019; Valenzuela & Caballero, 2018) and it is where the non-governmental organization that works with shared knowledge had worked, which in turn is the one that the director of the UGCK MMAYA directed the primary researcher. Cutusuma has a population of approximately 100 families and is located in the municipality of Batallas, in the Andes province, department of La Paz, Bolivia. It is one of many such communities in the Katari Basin. It is a

relatively remote rural community, with no running water in 2019, and the last community in terms of the location of the hydrological basin (however it is not where the water of the Katari River flows into Lake Titicaca, but is included on the Katari River basin and the smaller lake of the Titicaca basin).

Interviews, focus groups, and sharing in community

In the community of Cutusuma, the first author shared time with people in communitarian coexistence (*Convivencia comunitaria*). This means recognizing the values of affection and respect among us (them, me and work in Cutusuma). For us, the land or “el lugar” is a person, a mother and is sacred. Our human values in the Aymara culture (*Suma qamaña* or *Vivir bien*) (Romero, 2021) are represented in our imaginary symbolism of community territory and work which is the specific application of the social-communitarian and ecological significance of such values (Romero Morales, 2006). The first author was guided by a *yapuchiri* and accompanied by a colleague, coauthor and translator Egler Huarachi. Yapuchiri is an Aymara Agro-climatic observer organized in a social movement in the highlands (Huarachi, 2019). As Bolivian Aymara-Quechua direct descendent researchers, we interchanged ideas and facts from the water, climate and Aymara community spanning senior leadership, traditional authorities, elders, water experts and climate communitarian practitioners. Field research for this study was conducted in 2019, in the months prior to the so-called “lithium coup” in Bolivia (Castro et al., 2021).

A semi-structured interview instrument was developed to address intercultural and socio-political aspects of water and power, including knowledge and wisdom related to water and climate change (interview instrument in Spanish and English, in complements). The first author also asked which institution or organizations they had partnered with, and shared information to

manage water and climate interculturally, and which relations were successful. Questions in the interviews and focus groups were identical, so that the responses could be triangulated and validated.

Participants to the study were recruited in July 2019 prior to conduct the interviews which were implemented through face-to-face meetings that lasted approximately one hour. Prior to beginning the interview, the first author conducted an informed consent process, and following oral consent, audio-recorded the interviews. After the initial interviews, he conducted small group interviews (focus groups) with representatives from the local and national water governance organizations. Focus groups lasted for approximately 1.5 hours and were also recorded. Interviews and focus groups in the community of Cutusuma were conducted in the Aymara language, with verbal translation to Spanish during the interview by Egler Huarachi. Interviews conducted with participants outside of the community of Cutusuma were conducted in Spanish.

Table 1. Individuals interviewed from key institutions and organizations in Bolivia.

Institutions/organizations
<p>Multilevel Bolivian Governments (MBG):</p> <ul style="list-style-type: none"> ● Ministry of Environment and Water (MMAYA): Mother Earth Plurinational Authority (APMT) ● Katari River Basin Unit of administration (UGCK) ● Vice Ministry of the water (PNC: National Watershed Plan). ● Department of La Paz Government. ● Municipality of Batallas
<p>Cutusuma Aymara Community (CAC)</p> <ul style="list-style-type: none"> ● General secretary ● Agricultural secretaries ● Justice secretary ● Water secretary ● Proceedings secretary ● Community members
Water association of Batallas (WAB)

Promotion of sustainability and shared knowledge, non-governmental organization: (PSK)
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Aymara philosophers working on issues related to water and climate (APH)
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Participants were adults (>18 years) serving in public offices or Aymara community leaders identified by local authorities. In Cutusuma, Aymara leaders – *yapuchiris* (Agriculture person) (M. Quispe, 2018; Ricaldi Arévalo & Aguilar, 2014) – assisted in identifying the interviewees. In La Paz city, interviewees were identified through referrals from government officials present at meetings and events organized by government representatives and institutions. Based on the first author’s experiences in water and nature governance in Bolivia, he identified additional people to interview and was invited to and attended meetings with authorities about water management in the study area, where he observed participant behavior and comments. Additional interviewees were identified via snowball methodology. The first author determined that he had reached saturation when no new names of key or relevant informants were identified; this was feasible given the relatively small number of people working in qualitative methodologies at the interface of intercultural water, power and climate governance in the Katari River basin.

Audio recordings of interviews were transcribed in Spanish and coded using a codebook that was tested and refined during the initial coding process. The lead author had access to information that could identify individual participants during and after data collection; however, identifiable information was stored in a separate file from the transcripts, which were renamed with alphanumeric identifiers to protect the privacy of the study participants. Coding utilized four major categories: climate change (Aguirre & Cooper, 2010), water governance (Botton et al., 2017), political transformation (Klein, 2010) and intercultural engagements (Caudillo-Félix,

2012). Sixteen sub themes were developed from the data. Excel was used to organize the themes, subthemes, codes, and representative quotes (see complements). Themes and subthemes are shown in Table 2. Representative phrases or quotes were identified for each of the 16 sub themes to capture some key linkages and logics of engagements (Zimmerer, 2015). Only the lead author had access to the original transcripts and codes.

Table 2. Water and power intercultural framework. Themes and subthemes were used to code interviews.

Categories/themes	Subthemes
Climate Change	Climate and crops Climate change effects Climatic risks Risks prevention
Water governance	Social organization Water perception (what is water?) Water management Pipe water
Political transformation	Who has the power? (what is power?) <i>Vivir bien</i> Public policies Water is life (Water for life)
Intercultural engagement	Western knowledge Ancestral wisdom Traditional knowledge Coexistence

Table 3 display a total of 30 people (21 men, 9 women) were interviewed in July 2019. Twelve people (3 women, 9 men) participated in one-on-one interviews, including 7 community members, 1 from an NGO working in Cutusuma, 2 Aymara political philosophers, and 2 people from the government. Eighteen people were interviewed in four small group interviews: 1 group interview in Cutusuma (5 people: 4 women, 1 man), 2 group interviews with government (7 people: 1 woman, 6 men), 1 group interview with a neighborhood water association (6 people: 5

men and 1 woman). Men were overrepresented in the study because more men than women were in the positions targeted.

Table 3: Numbers of people who participated in interviews for this study by gender and by type of organization.

Interview/focal group	Organization	Women (9)	Men (21)
One-on-one (with or without translator)	Cutusuma community	1	6
	NGO		1
	Philosophers		2
	Government	2	
	<i>Sub-total: 12</i>	3	9
Group interviews	Cutusuma community	4	1
	Government	1	6
	Batallas	1	5
	<i>Sub-total: 18</i>	6	12
	<i>Total: 30</i>		

Results

The results of this study show that the response to climate change and water governance processes in Bolivia are directly affected by political transformation and intercultural engagement in the country. Climate change affects the crops due to climate risks (frosts, lack of rain), and local communities respond by applying ancestral knowledge to inform risk prevention. The governance of water and water management in the communitarian social organization, in different scales and dimensions especially when it does not have pipe water, is spiritually linked to the cultural conception of water as Mother as well as Mother Earth.

The political transformation of public water policies is coming from the focus of water for life in power into the *Vivir Bien* paradigm as hope and dream for the future in the present. Intercultural engagement reaches ancestral wisdom (*Amawtika* science) through indigenous traditional knowledge and then relates it to western knowledge to coexist in community. In particular, in the intercultural process, the current indigenous Plurinational government is moving from a Plurinational State towards a Communitarian State based on public policies and an ongoing process of political transformation. Key quotes are shown in complements. These findings are discussed in detail below.

Climate impacts, prevention, and adaptation.

People discussed the impacts and consequences of climate change and preventative actions. They noted that climate change is the consequence of the merciless exploitation of nature which causes global warming (heating), generating the climate crisis, thus showing that the planet is not infinite. They described the outcome of climate change as creating conditions impossible for life on the planet, affecting humanity by systematically depleting water, resulting in issues such as lack of water, reduction of bodies of water, climatic instability, melting glaciers

and retreat. The example was given of Sacred Illimani (*Quntur Mamani Achachila*: ancestor where the condor nests), a snow-capped mountain that is thawing. One person described this uncertainty:

"Today we (humans) are experiencing climatic instability; here, is something deeper; life arises from climatic stability. What will happen as a result of climatic instability? For us (Aymara people) it is transcendent" (APH: ENT-011).

They also noted disturbances in the frequency and intensity of rainfall. When people have more need for rainwater, there is no rain. One person stated, "If the human being begins to dry out, to disarticulate, the Earth begins to dry out as well" (ENT- 11), emphasizing that when the relation between humans and the earth is broken (dry and disarticulated), the earth suffers. They noted that every 40 years there is an extreme climate event in the Katari basin; however, interviewees indicated that over the last 15 to 30 years, the patterns of rain, hail and weather have changed, and climate risks are more dramatic. Before, it was known when it was going to freeze versus rain, but not anymore.

People described how climate risks affected a complex life system with interactions between human societies and nature. Excess or deficit of water can be harmful. The environmental functions are affected by changes in natural ecosystems, affected by productive systems. In Cutusuma, heavy rain, frost and hail are the most important climactic risks. People depend on rain for the potato crops (from October to January), and hailstorms, in particular, present a risk to potato production.

People identified ancestral wisdom with traditional knowledge of the Aymara peoples, which come from our ancestors through knowledge production, as risk prevention and a means of adaptation. They discussed the importance of not mistreating the *Pachamama*, or doing 'evil' so that there is rain, and avoiding polluting or burning unnecessarily. There is a prevention

system in Cutusuma to protect the fields from lack of water and hail in January and February and practices to prevent agricultural risk from hailstorms. The agricultural secretaries would blow the *Pututu* (alarm sound from a traditional horn) and use firebreaks or firecrackers, and the community members would gather outside and shout, and burn small fires outside of each home:

"When the hail comes we defend ourselves with *Pututu* (authoritarian cornet-type cow horn) damn it! With the *Chicote* (whip that symbolizes authority) we defend ourselves and it passes." (CAC: ENT-03)

To prevent frost and drought, they described bringing the small children outside and presenting them to the clouds and asking for no frost and more rainfall. When it is extraordinarily hot and sunny, the people say that this was an indicator that the hail will come. One person stated, "When it doesn't want to rain in Cutusuma, we must go with the *Amawta* (wisdom person)" (CAC:ENT-1) Ceremonies are made to call the rain, and they described practices involving using a toad to induce rainfall and reduce the likelihood of drought and the burning of rabbit manure to prevent a frost. Some people described praying to saints like Saint Peter for rain.

Water conception and governance.

If water is conceived as a resource, the liquid element, a common good or a necessity for life, then it is conceived as an object that has a function for life. However, if it is conceived as the source, as life or as a presence in movement with knowledge and wisdom, as a complement to *Pachamama*, then water is a living being, a grandmother and a sacred tissue. One person stated, "From an ancestral cultural perspective (water) is a living being that is born, grows, and also lives" (PSK: ENT-04). Water forms a duality, a relationality, and can bring people together or cause conflict. Another stated, "water is the articulating axis of society" (MBG: ENT-09). Others expressed that water tells us what water is. Another person stated, "(Water is) linked to

our life not only as survival in this life but as a means of coming to this world on this sacred journey" (APH: ENT-11). Water is life. Humans and non-humans alike are water.

People explained that water governance, in the context of water as a resource, is often focused on piped water management (see Hirsch 2008) . In places with a communitarian organization, such as Cutusuma, that have no piped water (in 2019), then the authorities are responsible to coordinate the solution of water pollution, obtain water collection equipment such as barrels or tanks, and climate risk prevention that requires traditional knowledge and ancestral wisdom. However, when water is conceived as a living being, as a mother, then you cannot sell or buy your grandmother. If we people can communicate with water, we would know what water is and water will tell us how to work together to survive.

Social organization

People emphasized that water governance depends on social organization. Social organization occurs when water gathers people together, and people meet because of water. People in families are organized into communities. From the babies, girls, to the grandmothers, from the ancestors that includes the non-human. The social organization is from the family to the community and upwards to the province, department and national-plurinational levels. In the Cutusuma community, there is a general secretary, secretary of minutes, and two *yapukamanis* or secretaries of agriculture who protect crops and give warning calls. The secretaries, such as the water secretary, are *originario* (native) authorities of high responsibility. In Cutusuma, these authorities (*autoridades de la comunidad*) change every year. The community organization also has a water committee, which is like an association with statutes and regulations as well as the community itself.

Water in Cutusuma

In Cutusuma, community members described the sources and uses of water. Their water comes from wells for human consumption; water comes from rain for agriculture. The neighboring community sends some water for diverse uses and water comes from a little river for animals and *tunta* (dry white potato) production. The quality of water depends on the level of contamination, such as the presence of plastics bags. People harvest rainwater from the roofs of houses and capture water in barrels. Food production depends on the rainwater quantity and frequency in the maturation of the plants time.

Piped water is the main need in Cutusuma where there is no piped water yet (in 2019). One person stated, “There is a huge problem here in Cutusuma, which is the lack of (piped) water” (CAC: ENT-6) This is especially problematic for the houses that are far from the community, close to the mountain slopes. In the community assemblies, the issue of water was debated and a water source was proposed that is in the park near Cutusuma. The source of water is the Andes mountains range. The “multipurpose” project is financed by the national government (MMAYA) and municipal government. The 15 communities of the project are in constant communication in meetings where users and leaders participate every 15 days. People expressed that there is no hope for the project because it has been promised for a long time and it has not been fulfilled yet.

Water, Power, and Political Transformation

Who has the power if the fight is for water? People stated that the power struggle over water is historically conflictive in Bolivia. The power over water is held by the communities where the water comes from. However, water itself has the power to destroy or give life. The water comes by the power of natural gravity whereas the government only has the power to

authorize. Power is also the ability of the government to better manage water to bring projects and have assistance.

People described how the political transformation witnessed today in Bolivia is a process that began in 1492, and re-surfaced in 1992, as a non-capitalistic paradigm with Andean spirituality, with sacred energy in space and time called *Vivir bien*, or living well together, for human and non-human life. From 2006 until 2009, a Plurinational State of Bolivia emerged from the vision of indigenous peoples and the strength of social movements; these political processes are still happening today.

"The power was held by the transnationals because they could influence national policies and take control of the resources, so now this has changed, now the power is held by the state." (PSK: ENT-04)

In 1992, the indigenous people from the *Abyayala*-Americas continent went from a state of resistance to take the power.

"We (Indigenous people of the continent) have raised the struggle of indigenous peoples not only for power--because in the beginning it was power--but today it is for life." (APH: ENT-11)

Bolivia had historically been at the command of more powerful countries. The power of powerful countries hurts. Taking up arms was not an option because this would have been questioned by the world, the United Nations, and international law. The democratic way in Bolivia consolidated the victory to transform the state with the expulsion of the last neoliberal government in 2006. Before 2006, the power was held by the transnationals; today the state has the power. Power was transferred to the state.

"The power was held by the transnationals because they could influence national policies and take control of the resources, so now this has changed, now the power is held by the state." (PSK: ENT-04)

However, some people expressed that those in the immediate circle of power around the President did not necessarily support pro-indigenous policies. The power, politically speaking, is in the hands of the national president who is elected by the *bases* (people in the communities). The corruption of the politician begins when they do not remember where the power came from (the communities). The power of the human being derives from the energy of the *Pacha* (sacred space and time), in dialogue with the *Kamasa* (energy), during the most important moments in the history of Bolivia. The uni-national states (prior to 2006 in Bolivia) crushed the indigenous peoples on the continent, and the way to leave that paradigm is the Plurinational state. The structural transformation is to transform the source, the logic and the paradigm that has not yet been achieved towards the communitarian logic.

Vivir Bien, a paradigm for Life

Some people interviewed described *Vivir bien* (living well) as the demand for a paradigm, which is a product of the culture of intercultural dialogue on water (human and non-human life) for the future. People, animals and plants suffer from lack of water, due in part to modern development, which unbalances communities. In contrast, water helps maintain balance with the environment. People emphasized that it is time to show the importance of water. The struggle of indigenous peoples is a matter of life – we are fighting for life. The struggle of the native peoples is the defense of Mother Earth. Although non-native environmentalists are allies, indigenous people felt that environmentalists defend the environment only for human beings and did not include non-humans. The academy and dominant scientific paradigms do not validate the defense of life in the way that native peoples propose. Science and scientists are not well oriented. One person indicated that the Bolivian process of political transformation has emerged from indigenous peoples and social movements.

"The Bolivian process that we are experiencing has not emerged from the rationalism of the academy or of intellectuals; it has emerged from a vision of indigenous *originarios* (native) peoples and the strength of social movements." (APH: EN-11)

From the dialogues an interviewee implied that Bolivia is not following the global logic of economic progress and development, and government elites are not up to the task. Capitalism has replaced spirituality, and Western science advances in a world framed in development. The development paradigm has not solved the world's problems. A paradigm shift is being proposed. Identity-- as a form of political resistance-- is now a response to the global crisis. In 1992, the *originarios* peoples' agenda emerged with four points: The human being is not the center of everything, don't blow up the mountain (ancestral being), life is the transcendent factor as a horizon for those who come, and a paradigmatic change for life, to change the Western hegemonic colonial logic will be required. It is a matter of life.

Water policies

The Plurinational Bolivian constitution, adopted in 2009, recognizes water and the right to water, and people - especially indigenous people - voiced their support for the constitution. Many interviewees emphasized that policies are required to protect water. Others in the focus groups said that water is governed by the Mother Earth Law and the Ministry of the Environment, and it is not known to which is given priority. From the groups where the government public servants participated informed that in Bolivia there are no public policies that regulate the excessive use of plastic or drilling of wells. They suggest that more policies and laws are needed to conserve the mountain ranges, to avoid drying out groundwater, to incorporate the environment into public education, and to address what is quality of life. More local policies are needed, along with better knowledge management. One indigenous Aymara leader and philosopher said that at a global scale, Bolivia proposed to the United Nations (UN)

the concept of water as a right of all life; however, this concept was misunderstood, and instead, the UN accepted water as a human right. Additionally, Bolivia has proposed the concept of water diplomacy to the UN. He participated in that process in the UN.

Western cultural and ancestral wisdom

People stated that Western knowledge in the Western culture has neglected life itself and, therefore, water risk prevention. Western culture says that scientific knowledge about water should continue to be deepened, mapping and learning more about the hydrological cycle. From that way of seeing, it does not matter whether the water has life or not, what matters is that there is water, that it is not lacking, and that it is of good quality. Western knowledge over the past centuries has emerged along with a new economy that has grown material wealth exponentially. With the appearance of money, appears greed, greed for greed. The western culture in that modern world have been sustained by extreme rationalism by the academy, as described by one person:

"So when modernity imposes itself as a world, it needs to produce knowledge that justifies or legitimizes it. The knowledge it produces is called modern science." (APH: ENT-13)

Modernity has conceived of water as a resource, an object of exploitation, thus undermining the source of life.

"The issue begins with the world that has produced modernity. No culture, no civilization, before the modern world, had ever devalued the sacred condition of nature (water)." (APH: ENT-13)

People described ancestral wisdom as based in ritual, such as activities with different tasks to communicate with the spirits or deities. In Cutusuma deities include *Facilpata*, *Masinpata*, *Caecaca*, *Suquiukollo*, *Santoronani*, *Kawirin*, *Quilani*, *Wirinjalani* and *Kalacacha*.

From the ancestral worldview, water is life. Life emerges from the *Pachakamak* or Father Cosmos and from the *Pachamama* or Mother Earth. Everything is linked and everything is alive in the Aymara worldview. Mother Earth has her children like Grandfather Fire, Grandfather Wind, Mother Water, Father Sun, Mother Moon, and from there life emerges. In these relationships, the *Achachilas* (spiritual mountains) are sacred windows and custodians of water, so after our relationship with the Pachamama it is with the mountain that is the grandfather or grandmother who gives us water. Water is linked to our life not only for survival but as a means of coming to this world on this sacred journey. They described our watery origins,

"Life is conceived in the Aymara world as when we come to this world, we come with lightning (Thunder-Illapa) and we come through the subterranean veins of mother earth and we emerge into this life through the sacred slopes, through the *pacarinas*... from there we emerge." (APH: ENT-11)

"The *pacarinas* (source) from there we emerge, therefore, when we have to go (to die) we go down the rivers, even with the lightning (Thunder) to the (Stars-wara wara) constellation." (APH: ENT-11)

People explained that the drought comes when hope is lost, when the human being (spiritually) dries up, there is no hope. One person stated, "Water comes when there are dreams, when there is hope, when there is that coexistence, that renewal, that joy in the community" (APH: ENT-11)

People described how traditional Aymara knowledge and ritual knowledge comes from reading the clouds, birds (as the first author's grandfather use to speak to the birds) and other bioindicators to predict rainfall throughout the year. In the cradle of the Aymara culture, in the northern highlands of Bolivia, at specific times of certain periods of the year in July, August and September, if the clouds come from the eastern direction, it is a good year for crops. Reading the movement of clouds is also ancient knowledge that is used for weather prediction. In the *altiplano* (highland) sector, bioindicators are used to know when to sow or when it will rain. For

example, if the bird “*leke leke*” lays its eggs above the furrow, it means that it will rain a lot that year. Rites are performed in August to the ancestors, fulfilling the traditions. In Cutusuma, on a specific date called San Andres celebration in November, people make ceremonies so that there are potatoes to eat. Only if there is rain, then there will be potatoes.

Coexistence, interculturality, and a communitarian state

People emphasized that intercultural coexistence is supported by the value of water as a living being, which is in conflict with the value of water as a good for purchase and sale. The practice of Andean spirituality is through a connection with (non-human) nature. Through that practice, water has life, and a dialogue is conducted with water in sacred places, although it is a weakened practice. There are two cultures—one ancient and the other modern. *Pachamama* and *Dios* (God) could be intercultural. The intercultural is an instrument of relationship between indigenous movements and the state. The strategy of interculturality was to demand the right to preserve our culture as an identity. Many public officials come from the original peoples, and it is necessary to recall ancestral knowledge. Institutions should combine and respect different knowledges, relating the technical and the scientific with the cultural and ancestral. This process of indigenous and political transformation was highlighted by interviewees as exemplified in the following quotes,

“Many of those who work in these government institutions also come from indigenous peoples; it is necessary to recall ancestral knowledge.” (MBG: GF-02)

“We indigenous peoples in government are in a process of transformation, power then means first to understand that first we have to transform the structure.” (APH: ENT-11)

This political transformation can reach the next deeper level, *the emergence of the*

Communitarian State of Bolivia, as described in the following quote,

“To transform structurally and that structure will be the source, the logic, the paradigm and those are the guidelines of the current constitution of Bolivia, we are still not transformed public institutions, today are under individual logic they are not in communitarian logic.” (APH: ENT-11)

There could be an intercultural dialogue with ethics in the production of knowledge. Intercultural engagement between western culture and ancestral wisdom can be mediated by traditional knowledge-- if and only if it is sacred, through offerings to our deities. Greed must disappear to recover our balance with our family system through mother water intercultural dialogue.

Reconnection of Researchers with Mother Earth

People were asked to describe the desired outcomes with respect to water and climate change research. They identified the outcome of coexistence in hope and joy for dreams and *Vivir bien* (living well). Coexistence resulted from an intercultural engagement where the researchers align with indigenous/government in *Pacha* (sacred space and time) with *Kamasa* (energy). Because who has the power in the political transformation is Mother Earth; therefore, researchers in *Pacha* with *Kamasa* are Mother Earth researchers. People emphasized that researchers must deeply study water and climate change aligned with indigenous/government; however, they identified the challenges of a government that separates the environment from Mother Earth, as indicated in the following, “There are rights of Mother Earth and there is a Ministry of the Environment, and it is not known to which is given priority.” (MBG: GF-02). However, they emphasized that it was important to give priority to the rights of Mother Earth, the spiritual and sacred dimension of research. The concept of Mother Earth surpasses the concept of environment, so we must be Mother Earth, we must be reconnected to Mother Earth, before studying water and climate change. As researchers, indigenous, public officials, we are all human beings as expressed in the following quote,

"The power of the human being is also derived from the power and energy of the *Pacha* (sacred space and time); if you want to find the original “*sede*” (base, origin) from which human power emerges you have to go to the Kamasa or energy to the will of life, that is present in the Pachamama (Mother earth) and in the *Wakas* (energetic spots) (APH: ENT-13)

Discussion

From the first author’s interviews and focus groups discussions, as summarized above, two results are relevant to discuss as key findings which respond to the research questions: First, the transition in the Plurinational State of Bolivia toward a Communitarian State, and second, the reconnection of researchers with Mother Earth.

First, Article 1 of the Plurinational Constitution of Bolivia 2009 says: “Bolivia is constituted in a Social Unitary State of Plurinational *Communitarian* Law, free, independent, sovereign, democratic, intercultural, decentralized and with autonomies” (Translation TCP, 2018). The present study revealed that public institutions are under an individual logic, not under a communitarian logic, according to those interviewed. For example, in 2019, when the interviews were implemented or the spaces of dialogue were open, the director of the climate change institution of the Ministry of Environment and Water (MMAYA, APMT) was a PhD marxist and Biologist. Today, in 2021, the director is the executive secretary of the communitarian social movement of the intercultural women of Bolivia (Council, 2021)– a woman who represents thousands of indigenous women of the Bolivian Women's Trade Union Confederation of Intercultural Communities (Prensa latina, 2021). This suggests a significant shift in leadership, with an institution that is now headed by someone who applies communitarian logic. The results of this research, in that sense, reinforce the Plurinational and Communitarian State of Bolivia led by the communities of Bolivia, who had proposed to the

world the paradigm of *Vivir bien*, inspired by the worldview of the original indigenous nations and peoples.

With respect to the second key finding, usually the ‘researcher’ is a professional of the modern science academy with a degree from a university in Bolivia or outside of Bolivia. In order for that researcher to have an appropriate cultural approach to study water and climate change in the Katari River basin, the findings of this study show that the researcher should reconnect with Mother Earth and Mother Water for the approach with respects the Aymara traditional knowledge and ancestral wisdom. The reconnection with the energy of the planet Earth is needed not only in the study area but in the whole planet in climate change crisis. Today, the Vice Presidency of Bolivia is headed by an Aymara leader who openly applies ancestral knowledge in each public speech. In his words, for us who listen and react with feeling and thoughts, it is about Andean spirituality of our ancestral origin, which is alive and present today as ancestral knowledge. The Vice President’s team is in the process of declaring Titicaca Lake subject to rights based on the national Mother Earth Law, recognizing the sacred value in the spiritual dimension of the lake. Those thoughts and feelings should lead our researchers.

Other studies based on water budgets and socioeconomic information at the beginning of the 21st century, such as Vörösmarty et al , (2000), recognized that, as a consequence of global warming, a large part of the world population is experiencing water stress and increased demand for water. They identified how difficult it is to assess the future suitability of water due to a “complex geography” and the speed of changes in the availability and use of water. They also identified that indirect human impacts on the “global water supply” remains a poorly articulated but very important aspect of global change. If both of the key findings of this research -- the communitarian approach and Mother Earth reconnection-- could be included in “socioeconomic”

and “global water supply” understandings, we might expect more articulated results at a global scale.

In La Paz and El Alto, Centellas identifies a between government management and - water crisis within the more complex macro-relation of climate change and political problems (Centellas, 2018). If Andean Aymara spirituality could be added to the analysis, and respect and honor for the importance of government public servants to incarnate the feelings and thoughts of ancestral wisdom, we could expect fewer tensions in the relationships mentioned above. All of the prior studies in Cutusuma mention the central role of ancestral knowledge (Gomez, 2018; Huarachi, 2019; Valenzuela & Caballero, 2018), and there are hundreds of other Aymara communities in the Katari River basin similar to Cutusuma.

Results from this research highlight a vicious cycle between modern Western science and climate change. Western science has been unable to deeply address climate change due to the lack of connection with the sacredness of life. What would make me intuit this cycle is that modern science and academic researchers are embedded in a Western socioeconomic model, emphasizing economic dimensions and fear in the study of climate change; instead of reducing climate change, we are facing a deeper climate crisis. According to this research and others (O’Neill & Nicholson-Cole, 2009) it should be considered to replace the economic approach based on fear and to motivate a connection with the sacredness of life (Pulido, 1998) and hope, thus breaking the vicious circle.

The result of this research and the triangulation among Cutusuma-Governments-Philosophers-NGO outcomes; congregate, in some way, the essence of the Bolivian proposal from the Plurinational scale to the world: the global scale of climate change. That proposal argues that global capitalism is a structure that exacerbates climate change, and this was

presented at a global scale by the platform of the originario indigenous nations on different occasions. As this was being written, the people organized in social communitarian movements in the government were together getting ready for the United Nations Conference of the Parties 26 (COP 26) in United Kingdom. Bolivia presented its position in many related events based on communitarian organizations.

The findings from this study describe a state that is guided by the vision of indigenous peoples with the strength of social movements, which are united but unique, each one of them. The strength of Bolivian social movements is guided by the vision of indigenous peoples, and the vision and strength are united, in the sacred times and spaces with *kamasa* or energies. This view dialogues with some political ecology authors such as Zimmerer (2013), who writes about recent environmental governance in Bolivia. Zimmerer introduces and develops the concept of "speaking as an indigenous state" which from him sounds like as a criticism of the Bolivian state (using indigenous ideas/language but acting otherwise, Zimmerer argues). Zimmerer writes that the version of the Mother Earth law that was adopted is different than the version presented by the indigenous social movements (maybe with some), and he accuses the government of being inconsistent and with potential contradictions. We disagree with Zimmerer in parts and we agree with him in other parts. For example, when he refers to the concepts of Living Well and Mother Earth as representing people's identity. He bases some of his conclusions on water management projects, the El Bala and Misicuni projects – two projects that are controversial for many reasons not discussed here. However, in this study, we have focused on the Katari River basin and the Cutusuma community, and a communitarian approach. In contrast, Zimmerer focuses on projects and does not focus on people, community organizations, or complex geography or ethics,

ontologies or epistemologies. On the subject of indigeneity and re spatializations, the communitarian approach is required.

This study describes how in the social organization of the Aymara community, the relationship between the *Amawta* or Aymara wisdom person who is part of the community and the *Achachilanaka* or sacred deities of the mountains, fortify a relationship superior to the strictly human, and express a sacred connection with the non-human in the prevention of agricultural risks due to lack of water resulting from climate change. This fundamental finding, also respectfully studied by many authors in Bolivia such as Simon Yampara (Yampara, 2016), appears in this culturally appropriate investigation that places the sacred above the human, deeply respecting the *Amawta* wisdom persons and the ancestral wisdom reinforced today in the Katari River basin.

These key results also reveal a great limitation of the European-American political ecology field of study, fueled mainly by the Marxism of the 1970s, which influences the countries and nations in the Abyayala or Americas. In other words, political ecology is incompatible with indigenous spirituality Andean culture. However, European authors such as Burman (2017) mentions, with respect, the *Achachilanaka*; Burman also brings up the ridiculization of the sacred made by other strictly Marxist authors who could be said to be contemptuous of indigenous spirituality such as Stefanoni (2011). So when in the socio-environmental and spiritual approach, a terrible mockery and discrediting is identified on the side of those who do not have a spirituality, this serves to uncover the weakness and shakiness of their position. As a consequence, a conflict is generated, which could be understood as an intercultural conflict.

In the context of ancestral wisdom and its relationship to climate change, which is represented by the *Amawta* and *Achachilanaka*, it would be important to consider, on a personal scale, spirituality that is distinct from institutionalized religion. This does not eliminate the Christianity that is practiced and defended by some Aymara or other people – what it does is demand intercultural respect to exist.

The results of this study corroborate findings from Rist, et al. (2003) on the values and ethical principles rooted in the social and spiritual life in Aymara Bolivian communities. Both this study and Rist's study show a community coexistence that is configured and arises from processes of dialogue between the local worldview and some external historical influences. An understanding of the epistemological basis of ethical values becomes a clear priority and sign of self-government. Authors including E. Ostrom recognized the relevance and importance of self-government (Ostrom, 1990, 2000, 2005, 2009). The balance between individual and social cognitive competencies generates social coherence, which was and continues to be necessary to withstand moments of crisis and conflict. Through this studies' process of research, spaces of dialogue were opened in July 2019.

In November 2019, a corrupt government took power in Bolivia by force. One of their first actions was to privatize water and other services, similar to the intention of the neoliberal government in 2000, before the War of Water. Findings from the present study strongly indicate against the privatization of water in Bolivia. This aligns with the perspective of authors e.g. (Adger et al., 2013) who indicate that climate change threatens the cultural dimensions of people's lives and livelihoods, that include material and lived aspects of culture, identity, community cohesion and sense of place. The response of societies to all dimensions of global climate change is mediated by culture. There are important cultural dimensions to the way

societies respond and adapt to climate-related risks. Adger et al. (2013) and this study demonstrate how culture mediates changes in the environment and changes in societies, and we elucidate shortcomings in contemporary adaptation policy.

This study reveals not only a relation between indigenous knowledge and science, but also government and integral water governance. For example, the request for piped water from Cutusuma could be linked to the model of integral development described in Bolivia's Mother Earth Law. In neoliberal times, "indigenous" knowledge was treated as a significant resource for development. Whether economic development is problematic with indigenous autonomy depends on the way in which development is conceptualized. Agrawal states, "To productively engage indigenous knowledge in development, we must go beyond the dichotomy of indigenous vs. scientific and work towards greater autonomy for indigenous Peoples"(Agrawal, 1995). Article 2 of the Plurinational Bolivian Constitution guarantees the free determination of the Indigenous original *campesino* people. Spiritual indigenous ancestral wisdom, research and government are a key trio to stop climate change, fear, and lack of water; with hope, joy, and articulation in coexistence.

Adequate dissemination to the public will increase the robustness of the water protection and climate change discourse by dialoguing social and environmental science with indigenous knowledge to address climate change adaptation to inform proper water governance. Bridging knowledge spheres could reduce the vulnerabilities of the ancient native populations to adapt to climate change, as they have adapted to climatic changes many times in the past.

Conclusions

The culturally appropriate research approach to study water governance in Bolivia is based in ancestral knowledge and the *Vivir bien* paradigm. The Aymara communities are key

political actors in the engagement process that is transforming from the Plurinational State to the Communitarian state of Bolivia. In order to reduce the risk of lack of water, the government (including many of direct indigenous descent), must recall the ancestral knowledge among multilevel governmental actors in the Katari River basin and the minor Titicaca Lake, in the department of La Paz, Bolivia.

The Aymara conception of water is multifaceted and embedded in Andean spirituality, setting people against multiple realities and worlds. This conception is broader than ‘water as a resource,’ and narrower than ‘water can tell us what water is.’ Water gathers people together in social organizations, and water equalizes us as people; and at the same time, water conflicts us culturally.

The effect of climate change on the provision of water puts life itself at risk. Risk prevention informed by ancestral wisdom is different than actions informed by Western modern science. Climate-water governance is codependent on Aymara social organization and ancestral and traditional local water management. Political transformation drives power to the persons and to the families in the communities towards *Vivir bien* as a horizon to dream and to have hope for life itself, through public policies as the Plurinational and Communitarian constitution and the Mother Earth Law. Intercultural engagements mediating between modern Western culture, traditional Andean spiritual knowledge and ancestral wisdom allow for coexistence.

Long life to the mother water, Titicaca Lake! *Jallalla Qutamama!*

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