R. Baigún

Saving High Andean Wetlands for People and Nature

We work to conserve High Andean wetlands, given their importance for biodiversity and the well-being of the communities that depend on them.

Wetlands
INTERNATIONAL

Natural treasures

High Andean wetlands are vital ecosystems for biodiversity and local communities.

Located at elevations above 3,000 metres, they are true natural treasures. Set within arid and semi-arid landscapes, these ecosystems serve as essential freshwater reservoirs. They sustain the livelihoods of local communities and their livestock, support unique Altiplano species, and provide resting sites for migratory birds. In addition, they contribute to mitigate the impacts of climate change.

DRY PUNA. Located above 3,000 metres, the southern Dry Puna is characterized by low rainfall (100–400 mm per year), limited surface water availability, and endorheic systems – with no outflow to the ocean –. These extreme ecological conditions support unique species that are highly adapted to this environment. Local communities depend primarily on groundwater and seasonal rainfall for activities such as sheep and llama grazing.

High Andean ecosystems are critical habitats with deep cultural significance.

Conserving and restoring High Andean wetlands requires a long-term commitment to responsible water use, environmentally sustainable practices, efficient technologies, adequate livestock grazing management, and the restoration of degraded areas. These actions are essential to safeguard these ecosystems and ensure water and life for present and future generations.

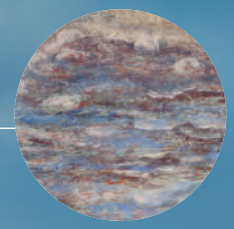
HUMID PUNA. Located at elevations above 4,000 metres, the northern Humid Puna receives more frequent rainfall (500–1,000 mm per year). It is characterized by wetland ecosystems, including semi-humid grasslands, shrublands, peatbogs, lakes, and freshwater lagoons. These conditions allow for the presence of permanent wetlands that support a diverse range of waterbirds and plant species, which is essential for local communities and provide the basis for grazing and freshwater supply.

High Andean wetlands

Water dynamics are crucial in these ecosystems, which provide habitats for unique species and are a vital resource for local communities.

They retain heavy rainfall.

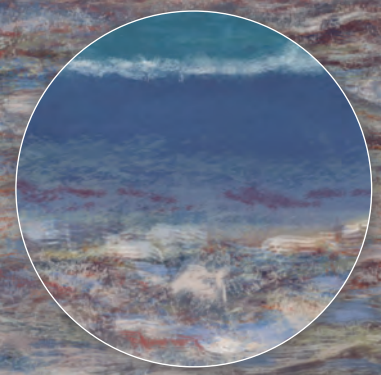
They serve as key habitats for endemic and migratory species.



Locally known as vegas and bofedales, they store water from seasonal rainfall.

They store carbon and contribute to climate change mitigation.

They support productive activities and provide natural spaces for cultural and recreational use.



Water infiltrating from the mountains accumulates underground. Part of it resurfaces and feeds the wetlands. In the dry Puna, evaporation and brine concentration predominate, while in the humid Puna, downstream runoff is the dominant process.

I. Behrens


V. Rivero Muñiz

The Programme

Since 2017, we have been supporting the implementation of ***sustainable grazing management*** *practices and* ***restoration*** *actions in High Andean wetlands (locally known as vegas and bofedales).*

The Programme encourages more sustainable grazing practices, supports the empowerment of local communities, and advocates for their rights in the face of extractive activities.

It aims to improve the conservation status of five High Andean wetlands that stand out for their high biodiversity and the ecosystem services they provide to their inhabitants: in Argentina, **Pozuelos Lagoon, Salinas Grandes** and **Guayatayoc Lagoon,** and **Vilama Lagoons**; in Peru, **Junín Lake,** and **Carampoma - Marcapomacocha**.

These sites face multiple threats, including **overgrazing, soil degradation, alteration of water resources** and **mining pollution.** Furthermore, the **effects of climate change** are altering evaporation patterns, rainfall, and both surface and groundwater flows. In recent decades, as a result of climate change, water availability has decreased, severely compromising the capacity of these wetlands to support biodiversity, livelihoods, and the cultural practices of High Andean communities.

Main lines of work

Sustainable livestock grazing management

We promote more sustainable grazing practices in High Andean wetlands, validated and adopted by local communities. These guidelines, compiled in best practice manuals, are based on biodiversity and productivity studies that enhance both livestock production and ecosystem health.

Restoration of High Andean wetlands (vegas and bofedales)

We develop management and restoration guidelines that promote sustainable water use and restore the natural functioning of water systems. All actions are based on knowledge exchange between technicians and local communities, integrating scientific and ancestral knowledge.

Conservation of shorebirds and flamingos

We evaluate the current and future impact of lithium mining on wetlands in Argentina, Bolivia, and Chile. We implement local and international awareness-raising initiatives to support the conservation of these ecosystems and protect the species that depend on them.

Empowerment of community leaders

We work alongside community leaders to defend their right to a healthy environment, supporting their participation in discussion spaces where they can contribute to the development of policies that recognize the value of wetland ecosystems.

Empowering Andean Women

We strengthen the rights and leadership of Andean women in wetland conservation. We promote the use of technologies that reduce their unpaid work, provide training in water management, and support participation in local decision-making.

Junín Lake (Junín and Pasco)
Junín National Reserve (Ramsar Site)
53,000 ha (4,125 masl.)

Population: Approximately 46,000 people

Importance: It is home to endemic and migratory species of waterbirds, some of which are threatened.

Main activities: Agriculture, livestock-raising, fishing, and tourism.

Main threats: Overgrazing. Peat extraction. Inadequate water management.

Photo: R. Baigún

Carampoma - Marcapomacocha
(Lima and Junín)
Located at the headwaters of the Rimac and Mantaro river basins
72,000 ha (4,300-4,700 masl.)

Population: Nearly 1,000 people.

Importance: It supplies more than 30% of Lima's drinking water.

Main activities: Livestock-raising

Main threats: Peat extraction. Overgrazing. Development of hydroelectric projects.

Photo: D. Aquino

Vilama Lagoons (Jujuy)
(Ramsar Site)
157,000 ha (4,500 masl.)

Population: Approximately 210 people.

Importance: It is a key site for migratory shorebirds, flamingos, other waterbirds, and native herbivores.

Main activities: Sheep and camelid grazing.

Main threats: Inadequate water management. Mining. Overgrazing.

Photo: D. Aquino

Pozuelos Lagoon (Jujuy)
Pozuelos Lagoon Biosphere Reserve (Natural Monument, Ramsar Site)
377,847 ha (3,500 masl.)

Population: 30 communities (10,000 people)

Importance: It is key to the survival of endemic and migratory aquatic birds.

Main activities: Sheep and llama grazing.

Main threats: Overgrazing. Mining. Groundwater extraction.

Photo: H. Sosa

Salinas Grandes and Guayatayoc Lagoon (Jujuy and Salta)
121,200 ha (3,600 masl.)

Population: 33 native communities.

Importance: It is home to important populations of flamingos.

Main activities: Artisanal salt extraction, agriculture, and livestock-raising.

Main threats: Mining.

Photo: H. Sosa

PERU

BOLIVIA

CHILE

ARGENTINA

Pacific Ocean

0 150 300 KM

Our achievements 2017 - 2026

KNOWLEDGE

We develop guidelines for the sustainable management and use of wetlands, based on a compilation of studies on their uses and threats.

- Sustainable grazing management plans.
- High Andean wetlands (*vegas* and *bofedales*) restoration plans.
- Hydrological studies.
- Lithium mining impact assessment.
- Identification and characterization of **20 priority High Andean wetlands** in the Puna region.

8 publications

on key topics such as sustainable grazing, wetland restoration, water management, and lithium mining in the High Andean regions of Argentina and Peru.

FIELD

We develop sustainable grazing and restoration practices in collaboration with local authorities and communities.

- **887 livestock-raising families** participating in the Programme's actions
- **661 livestock producers** trained in improved grazing management practices.
- **96 farms** in Pozuelos have transitioned to more efficient water use through the installation of solar pumps.

25,506 ha

under sustainable livestock grazing management in agreement with the communities.

524 ha

of wetlands under management with active restoration actions.

ADVOCACY

We work to ensure that public policies and development plans recognize the value of wetlands and promote their protection.

- We supported the designation of Salinas Grandes as Argentina's first **Indigenous peoples' and local Communities' Conserved territories and Areas (ICCA).**
- We coordinated the development of the **Management Plan for the Vilama Lagoons Ramsar Site.**

Management Plan for Laguna de Pozuelos Biosphere Reserve,

which acts as the general framework for the conservation and sustainable management of this territory.

MOBILIZATION

We facilitate the exchange of experiences, alliances, and agreements to strengthen conservation throughout the Puna region.

- We train **community leaders** and support them in defending their rights.
- **Geoportal** for the conservation of the wetlands of the Altiplano. https://geo.puna.org.ar/

Livestock Record Book,

that integrates local knowledge and technical know-how, strengthening the commitment of producers to environmentally sustainable livestock-raising practices in the Puna.

Workshops and training

on management and restoration of High Andean wetlands (vegas and bofedales), more sustainable livestock grazing, and wildlife conservation.


D. Aquino

Programme Implementation

Through Wetlands International, we lead and implement the "Saving High Andean Wetlands for People and Nature" programme.

We work with a wide network of institutions, including universities, research institutes, and civil society organizations, at the national and international level. Our main partners include Andean Ecosystem Association (ECOAN) in Peru, Environment and Environment and Natural Resources Foundation (FARN) and Foundation for Socio-environmental Study and Intervention (FEISA) in Argentina. We collaborate with national and subnational agencies responsible for managing protected areas to develop policies and strategic plans that promote the conservation and sustainable use of High Andean wetlands.

As part of our long-term strategy, we are promoting the development of a 10-year regional proposal for the Puna, which will bring together efforts, knowledge and commitment to advance the conservation of High Andean wetlands in Argentina, Bolivia, Chile, and Peru. This shared vision seeks to strengthen collaborative work between local communities, governments, and organizations, generating a lasting landscape-scale impact for both people and nature.

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Saving High Andean Wetlands for People and Nature is a Wetlands International Programme.

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