

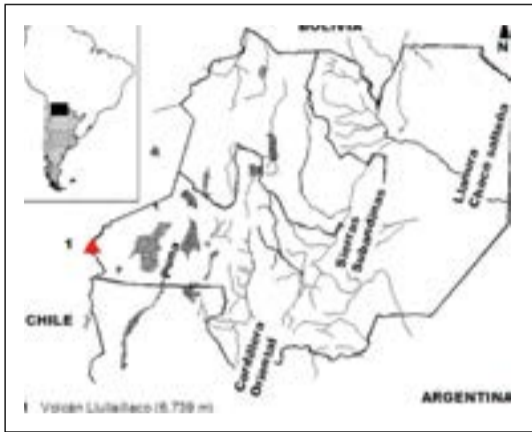


# Aerocene

Issue No. 2 May 2023

## Communities of Salinas Grandes and Laguna de Guayatayoc

# KACHI YUPI



## Salt Footprints

### Procedure for Free, Prior and Informed Consultation and Consent for the Indigenous Communities of Salinas Grandes and Laguna de Guayatayoc.

"For the Communities of the Salinas Grandes and Laguna de Guayatayoc Basin, *Buen Vivir* (Good Living) is the process of community life in fullness in our territory. It is being oneself with the community from its own roots. Achieving *Buen Vivir* implies knowing how to live and then knowing how to live together."

This document contains the work done in the territories of the communities of the Salinas Grandes and Laguna de Guayatayoc Basin. We have organised this document in order to build a path of resistance and political action using our own lives within a challenging context, due to current frameworks and policies that are functional to dispossession, in a horizon for Good Living "Sumak Kawsay", in which our actions are proposed as tools, strategies, production and revaluation of ancestral knowledge and experience. They are political-organisational alternatives that have their greatness in their communal realisation and their power in perseverance. This is different from the reality that is presented to us in development models and plans that do not dialogue with what we are: that do not take into account our community history, our needs and our potential.

Faced with this common reality, in our meetings, assemblies, gatherings, community workshops, debates, reflections and political struggles we have created a proposal to develop a Free, Prior and Informed Consent and Consultation Procedure for our Indigenous Communities of Salinas Grandes and Laguna de Guayatayoc. This is in accordance with the current legal framework in Argentina, especially Article 75, paragraph 17 of the National Constitution, ILO Convention 169 – National Law No. 24071 and the UN Declaration on the Rights of Indigenous Peoples. The aim of this document is to present the path we have taken to confront the territorial conflicts that we are experiencing in our region; proposals that go in a different direction from our Andean cosmivision, threatening the balance of the *Pachamama*. We believe in participation and consultation as mechanisms for the creation of integral and community policies. (...)

#### Why do we call it Kachi Yupi?

We created this document once we reached a consensus, following many discussions and debates. We consider this to be a tool for our community for defending our rights, families, culture, identity and our *Pachamama*. We have agreed that this is only our first step forward, a very important one and one that has cost us a lot of work, but that is not definitive or ever-lasting, because the process in our communities is constantly changing and/or evolving. We believe that over time and as conditions change, we will make adjustments, updates and improvements so that it can function as the tool we imagined and conceived it to be, and in this way, add to the communities that are like-minded to this document.

These are fragments of "Kachi Yupi – Huellas de sal", by the indigenous Communities of Salinas Grandes and Laguna de Guayatayoc. To read the full Kachi Yupi in spanish scan this QR code:



Lastly, in a general assembly with all the communities of the Salinas Grandes and Laguna de Guayatayoc, the document called "KACHI YUPI – SALT FOOTPRINTS / PROCEDURE OF CONSULTATION AND PRIOR FREE AND INFORMED CONSENT FOR THE INDIGENOUS COMMUNITIES OF THE SALINAS GRANDES AND LAGUNA DE GUAYATAYOC", was approved. Kachi Yupi collects the conclusions of the whole process, from an indigenous perspective. (...)

#### Our culture / development model

In a press release issued by the Indigenous Peoples' Committee of Salinas Grandes and Laguna de Guayatayoc on 11 March 2011, we stated:

"... during the past year, we have begun to be silent witnesses of a new activity in the region, nobody has informed us of anything despite the rights that require us to be consulted (National Constitution, Article 6 of ILO Convention 169). We found out through rumours and the media that lithium had been discovered in the subsoil of the salt flats of the Puna of Salta and Jujuy. All the announcements made by the government spoke of the importance of this new venture for the national and international economy. However, no one said anything about how this new exploitation could affect the communities and our territory: the salt flats, the springs, the pastures, our livestock, the *Pacha*, our customs and beliefs, and so on. In short: our whole life..."

As members of Andean cultures, we seek *Buen Vivir* rather than strategic development or individualistic economic growth. This is only possible if there is a harmonious relationship with *Pachamama*, if participation is strengthened, if identity and cultural diversity are protected, and if we regain control of our territories and our lives. Our model seeks to create conditions for a harmonious and happy life. Following this logic, it is not possible to take a partial view – but a holistic one. 'Pacha' is space, time, matter, spirit and also transcendental projections. Moreover, human life has meaning as long as it develops together with others. From this philosophical and spiritual framework, the indigenous communities of the Basin territory uphold a concept of development related to our deep sense of identity.

#### Our Communities and the Salt Flats

(...) Many of us work or have worked in the salt flats (...). The salt flats as they are known are part of our culture and identity.

From this perspective, salt is not an economic resource, but a "living being": it has a blooming cycle, just like sowing. In the months of October and November of each year, the "sowing" takes place through the construction of pools; from December until February – rainy season – the salt is "raised" in the pools; the "harvest" takes place from March until May; from this month the salt is transported to the facilities where it is fractionated for its commercialization. In August, asking for a good year for the salt and our territories, an offering is made to *Pachamama*, always in the same place, with the offering of coca leaves, food, drinks and the "sahumada" with coca. This is how the salt cycle is renewed, with a periodicity identical to the agrarian phases of the Quebrada, Puna and the Andes. The production is full of rituals, practices and secrets that reproduce a cultural identity pre-existing the State.

The communities hold a wealth of knowledge regarding the use of salt learned from the elders, such as the recognition of different types of salt (as food for human beings, for animals and medicine for different ailments) (...). The rational management of salt has been an ancestral conception of the communities, avoiding its uncontrolled extraction. (...)

There is also an affectionate, family-like relationship with the whole environment. Wild animals such as the puma or the fox give us signs of what the year will be like, whether it will be rainy or dry. Through their blooming, the wild plants warn us what the weather will be like. The weather itself is a family, it is common to hear that the hailstorm punished some crops and not others because "it has its way". This spiritual relationship with the natural environment must be respected, and any intervention must be done in conversation and respect for this culture.

#### The organisation of Communities in the territory

Although each indigenous community in the Basin has its own structure, in 2010, when faced with the advance of lithium mining companies, we began a process of coordination and uniting in order to address the implications of the activity. The emerging organisation led to the creation of the Assembly of Communities, which meets monthly to discuss different issues related to problems in the community, as well as a space to share our reflections and spirituality. (...)

Each Committee meeting is held in different communities within the territory of the Basin. This is where we reflect, learn from each other and decide the next steps that should be taken.

We have also established a *Mesa Chica*, an executive and coordinating body that will make decisions, composed of fifteen people from different communities in the five areas of the Basin territory: Route 11, Route 52, Route 79, Tumbaya Department and Route 75 (see map). From these spaces we have taken on the commitment to defend our territory and the community rights of indigenous peoples. (...)

#### The salt process / the consultation process

In accordance with our cultural identity and the reality of our community, and given that many of our communities live, work and interact with the salt, we have chosen to exemplify it as a characteristic of our identity and relationship with the Salinas Grandes.

#### SALT HARVEST

• **PREPARATION OF TOOLS**  
Before harvesting the salt, the working tools are prepared: shovels, pickaxes, axes, barges, *quelaya* (black) goggles and canvas bags. Food and drinks are prepared to *challar*. These consist of *chicha*, alcohol for *yerbabuena*, *piri* and *tijiticha*. The *challada* ceremony is held in a sacred place where it will always remain for future generations. During the *challada*, the tools and the workers are covered with *coa-coa*, coloured wool and their hands and feet are placed crosswise so that they are not caught by the soil and so that the work is successful. Nowadays the work is undertaken with the intervention of machinery and hand tools are also still used.

#### • CONSTRUCTION OF POOLS

Like in all Andean activities, the *challada* is also held at this stage. Then places where the pools will be built are looked for; this must be a clean place where not too much mud can enter. The dimensions of the pools are 4 x 2 m, with a depth of 60 cm and a water height of 30 cm. For the construction, the salt is broken towards the contour of the measurements with a pickaxe, an axe and a chisel, and the dirty part is removed from the pools and left at the side. Nowadays it is realized with a backhoe machine, and the measurements are 10 m x 1 m, with a depth of 60 cm and a water height of 30 cm. A salt cutter is used to cut along the contour of the measurement, and then the first piece of rubble is removed by hand so that the machine can work on it later. Once all the rubble has been removed with the machine, the pools are manually aligned and leveled.

#### • SALT BLOOMING

When it rains in the summer, the salt flats fill with water, and with evaporation, the salt is reared again. We call this the breeding or sowing, which has its own process until it blooms and ripens. The *tata INTI* helps in all that rears to the breeding, as well as the *Wayra* (wind) who with its breath mixes the *Vacu* (water) on one side so that the water slides through the whole salt flat and therefore the *Kachi* (salt) blooms everywhere.

#### • SALT CRYSTALLIZATION

Once the pools have been built, the salt is left to mature for a year, and then it is harvested.

#### • SALT HARVEST

When it is ready to be harvested, we once again prepare for the *challada* and the thanksgiving to *Pacha* for the new production of *KACHI* (salt). There are three harvesting techniques:  
1) Manually, from pools until all the salt is crumbled, which is washed with the same water that comes out of the excavation, then the granulated salt is removed from the sides of the pools. The unoccupied pools are swept and squared for rearing.  
2) Another form of harvesting is the salt loaves, which first of all consists of looking for the banks (fractioned spaces demarcated by what the locals call "veins"). First of all, an opening is created beginning with the veins, where a sample is taken to discover if the salt is good (even). Then, 30 cm wide and 4 to 6 metres long are marked from the veins, depending on the length of the bank. Afterwards, a straight line is marked out along this line, which is then axed until the cut is opened, aided by the use of crowbars. Lastly, the loaves are cut into 25 x 30 cm pieces, and then they are stacked and ready to be loaded onto donkeys or into lorries.  
3) Granulated salt or soft salt consists of sweeping the grain salt with a shovel. This grain salt is put in piles to be bagged in 50 kg bags and then sold on the market.

#### • SALT DRYING

It consists of removing the salt from the pools and placing it to one side, and leaving it to dry for a month. When done with a backhoe machine, the salt is left on the side of the pools and spread out for faster drying, considering the quantity harvested is greater.

#### CONSULTATION PROCESS

##### • PREPARATORY STAGE

From a community perspective, it aims to train, and acquire knowledge in the defense of rights, the existence of the protocols and its validity, and the implementation of strengthening and organizational mechanisms. This should be an ongoing task. Regarding the rest of society, it refers to the creation of strategists so that the State and companies recognise the protocol (a form of publicity for the project, actions, and places) and how to implement it, i.e. promoting of the document itself.

##### • DESIGN OF THE PROCESS

This would imply a first contact or meeting with representatives of the government, the company and the community (through the Assembly of the Salinas Grandes and Laguna de Guayatayoc Basin). Considering the project or specific measures, it includes the identification of the relationship between the actions of the project exposed to consultation and the rights that it will affect for us. It would culminate in the Assembly whose objective is to approve the design of the consultation process by answering a series of questions, applying the protocol to the specific case: how it will be, when it starts, where and who will participate in each stage. This is when the date of the next assembly would be defined, in which the actual consultation will begin.

##### • DEVELOPMENT OF THE PROCESS

In compliance with the agreements of the previous stage, the consultation process begins to develop in assemblies with the presentation of information to the communities (research, development and exploitation of the activity, impacts, benefits, disadvantages and consequences). The aim is to provide a solid basis of information for a later stage of decision making. A thorough understanding of the project and its impacts by all members of the community is important in order to make responsible decisions. Once the community understands that it has sufficient information, and understands the information provided, that it will move on to the next stage.

##### • MATURATION OF THE DECISION

The proposal involves an internal period of reflection and refinement. And an external period, in which doubts or requirements, requests for new information, extension of time or clarification of what has already been presented will be presented. The objective is to make a decision with thorough knowledge, responsibility and decisiveness.

##### • DECISION MAKING

At this stage, the decision will be taken and the necessary agreements and guarantees will be established, in case of an affirmative agreement, the objective is the participation in the development of the activity. If the outcome is negative, an agreement of respect for the process and decision is also concluded, as well as a guarantee of respect for the decision.

##### • FOLLOW UP OF THE PROCEDURE

This stage will include regular meetings, evaluations and monitoring of all steps in the activity. The objective is to keep the community present at all times as part of the process and its sustainability.



"We reject the public biddings for the eleven thousand hectares of Lithium in the Salinas Grandes and Laguna de Guayatayoc basin. The mother law must be respected! Article 75 paragraph 17 and agreement 169 of the ILO." Written by the Indigenous Communities of Salinas Grandes and Laguna de Guayatayoc.

# Lithium the senselessness of trying to mitigate climate change

The race to control the supply chain of what we now know as critical minerals, or minerals for the energy transition, marks a new chapter in the global geopolitical dispute. In the wake of the pandemic and the war in Ukraine, which demonstrated the vulnerability of supply chains, countries in North America, Europe and Asia, particularly China, are competing not only to dominate the technologies of the final products, but also for access to the deposits of these minerals, which are currently central to energy storage, as in the case of batteries for electric cars. In the context of the climate crisis, these products could reduce dependence on fossil fuels if the supporting infrastructure is in place and they are supplied by renewable sources.

Countries such as Argentina, which together with Bolivia and Chile have around 60% of lithium reserves in brine, see this interest in lithium as a window of opportunities to attract investment, particularly in a context of high prices. To a much lesser extent, they seek to underpin processes linked to the development of battery parts in the country. However, they pay little attention to the values of the ecosystems in which lithium is found or to the way of life of the communities that have lived there for hundreds of years.

Argentina is currently the world's fourth largest producer of this mineral and has approximately 50 projects in different phases. Focusing on the generation of foreign exchange required to repay the foreign debt, provincial and central governments prioritise these investments over complex but necessary hydrological studies to determine whether the operations can be realised without irreversible damage to the environment. This is particularly worrying in an extremely fragile region, where water is the scarce commodity that defines survival; its availability and quality could be seriously altered by the impacts of lithium mining, which has been considered true water mega-mining because of the volumes demanded in its processes.

The environmental management and policy tools designed to identify environmental impacts in order to prevent them are either not applied, such as the strategic environmental assessment, or are poorly applied, as mere formalisms, as is the case with the environmental impact assessment process. These processes are not undertaken from a holistic perspective that takes into account the whole basin – they are, instead, circumscribed to limited geographical areas – and do not integrate pre-existing water uses from other economic activities, nor those necessary for the life of communities and biodiversity in these areas. Lastly, they do not have a solid environmental framework, nor do they consider the cumulative or synergistic impact of ongoing or planned operations.

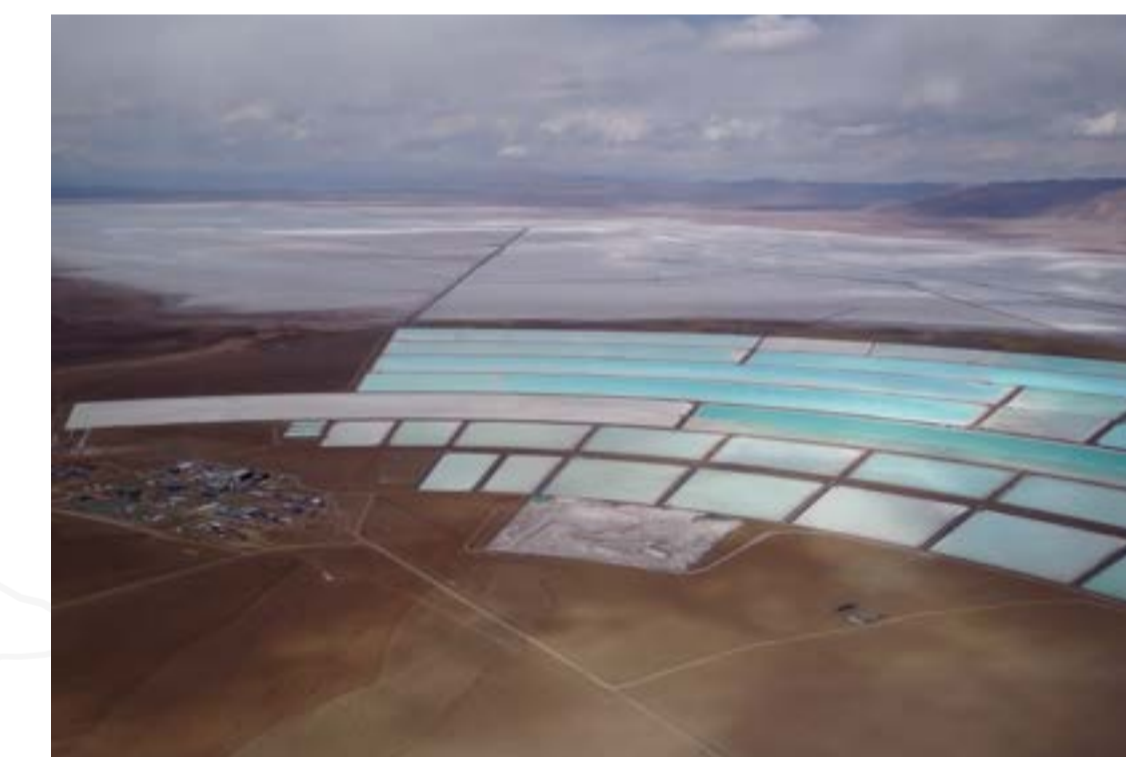
Information about the environment is not shared with the public, nor is there sufficient time invested to comply with the right to free, prior and informed consent, which requires time to communicate with the communities so they can understand the consequences of lithium extraction and the impact it has on their lives and culture, and give their consent when necessary.

As a result, communities such as those found in Salinas Grandes and Laguna de Guayatayoc have been resisting and defending their territory and rights for over twelve years.

Furthermore, lithium mining is promoted as the solution to climate change, ignoring the evidence that, in fact, the wetlands in which it is intended to be extracted, have a tremendous potential to contribute to the mitigation and adaptation of biodiversity and people to climate change. For example, micro-organisms that exist in these wetlands, have the capacity to capture and store carbon dioxide, while their degradation could lead to the release of greenhouse gases stored within them.

Considering lithium as an exportable commodity instead of solving the foreign exchange problem will most likely reinforce this problem by generating a new phase of dependent development, buying more expensive products such as possible electric cars. This leads to further problems regarding payment balances and the perpetuation of debt cycles, reinforcing once again the vicious cycle of exploiting nature to repay debt.

The loss of valuable biodiversity, traditions, Andean knowledges and cultures not only transforms these territories into sacrifice zones for the hyper-consumist model of the global North, which does not seek to reduce its demand for minerals and nature, but also reinforces existing inequalities and blocks the possibilities of considering a paradigm shift that prioritizes the lives of people and ecosystems, and teaches us to live within the limits of our planet.



Water-Lithium mining in the Salar de Olaroz, Jujuy, Argentina

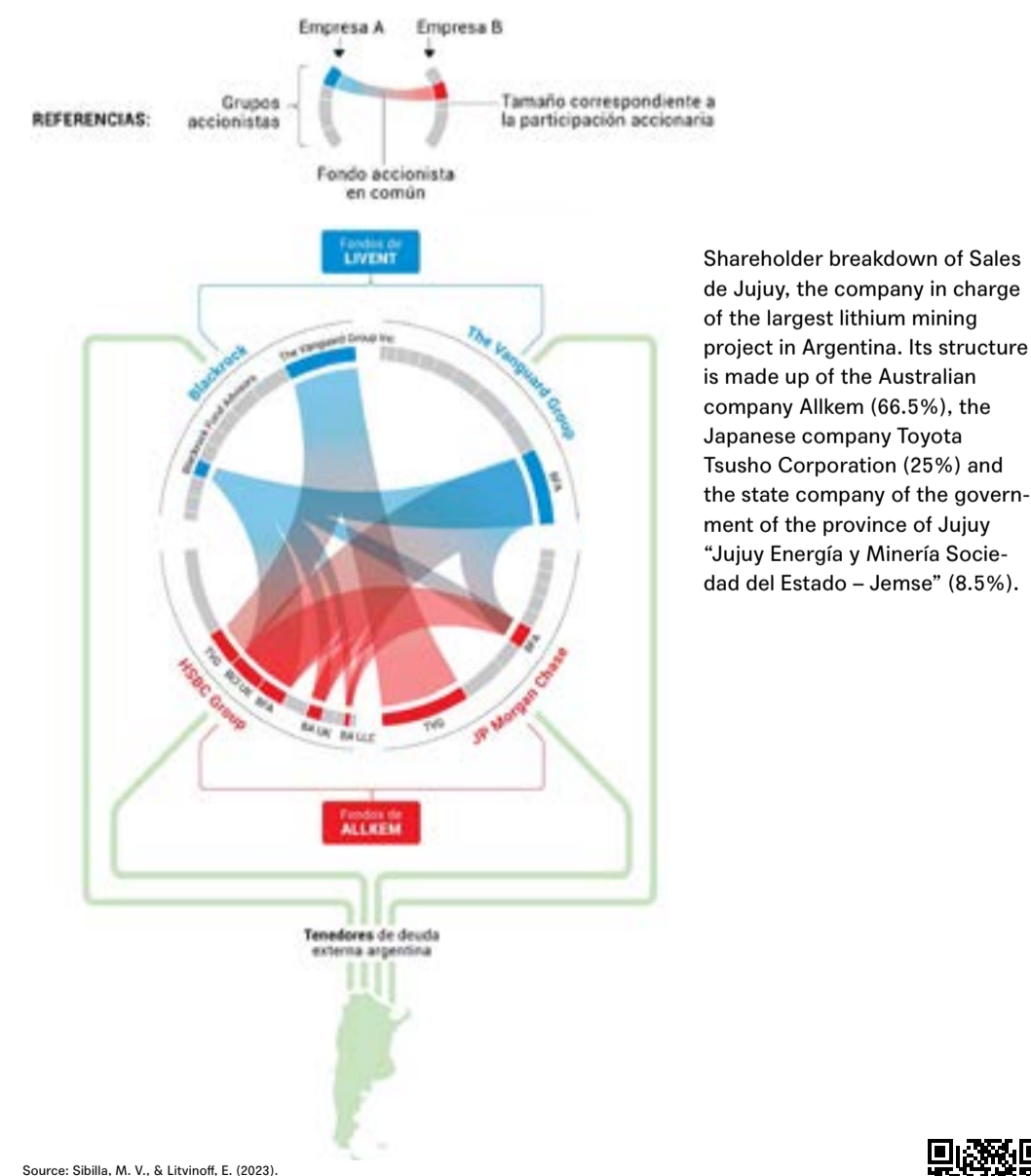
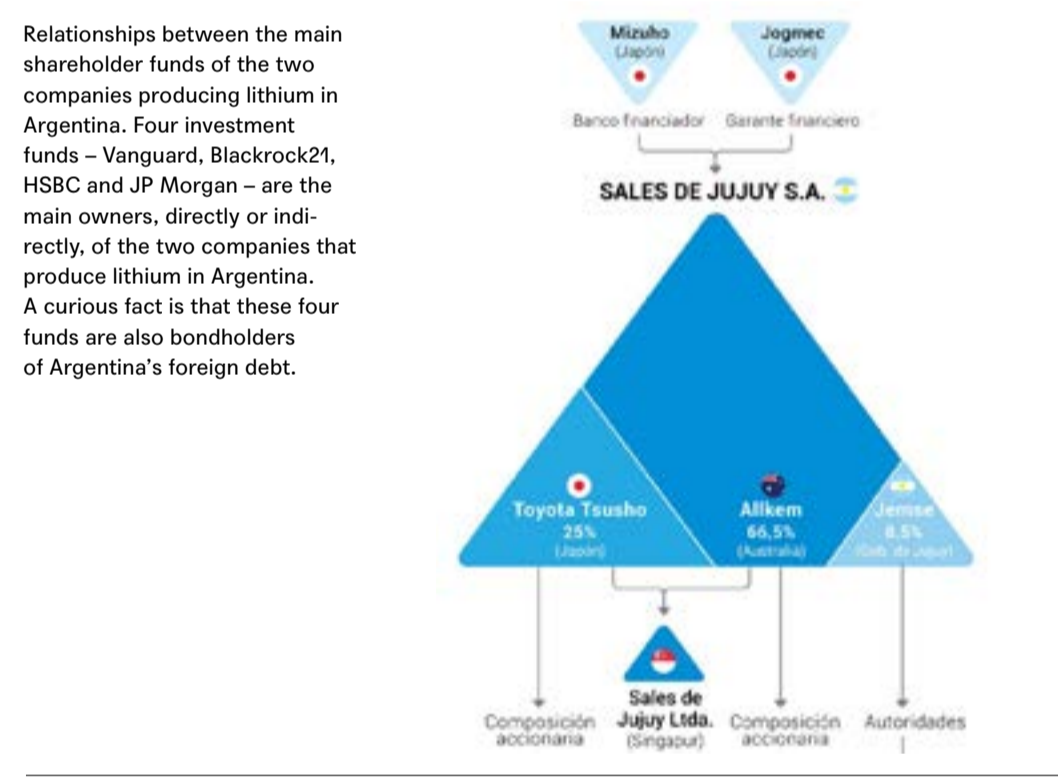
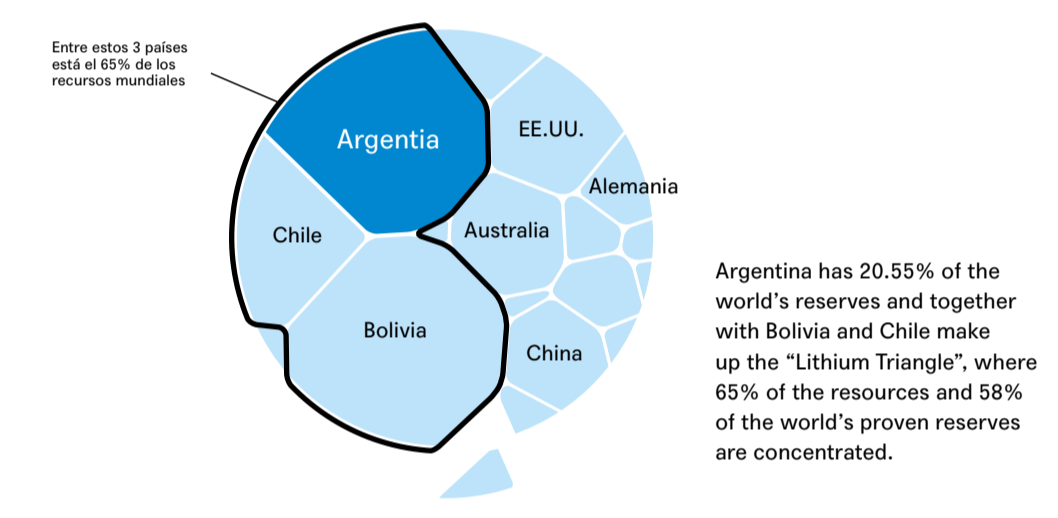
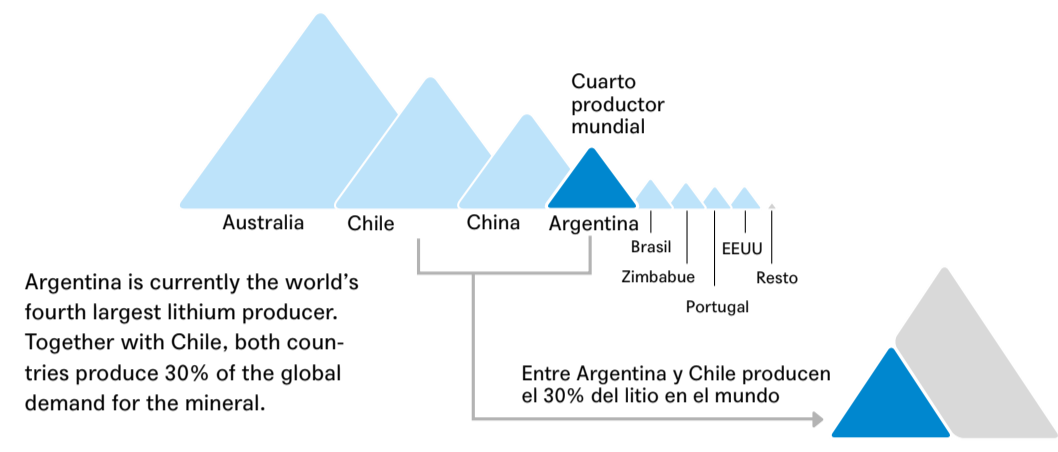
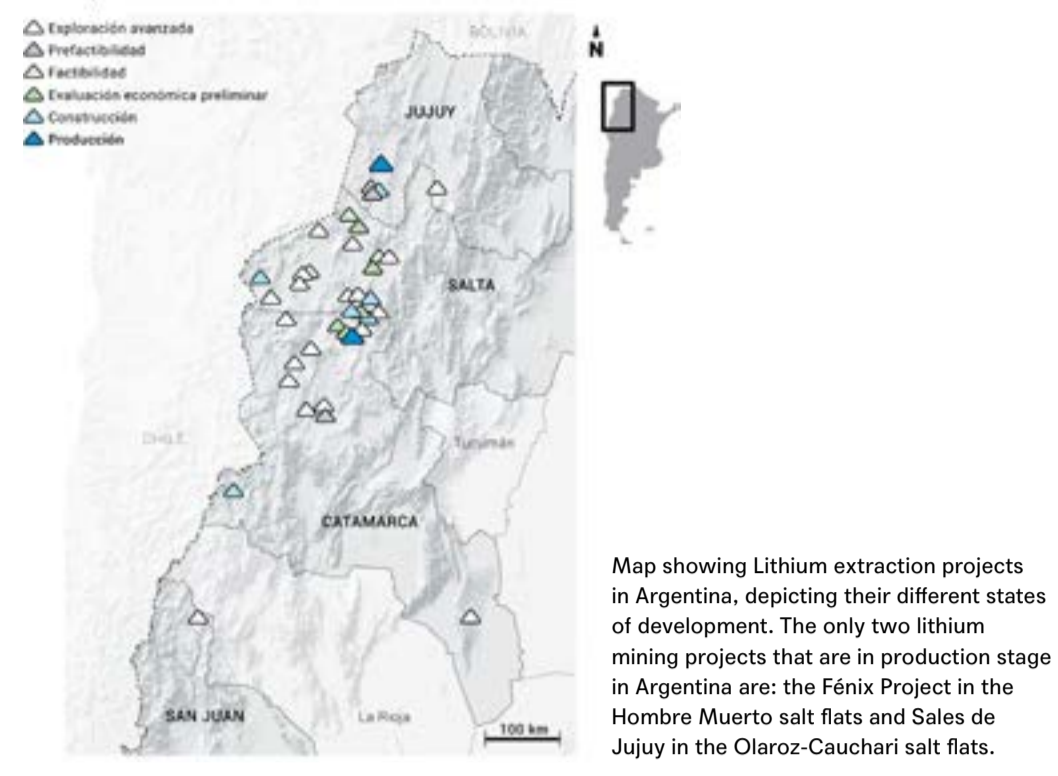
# at the expense of both nature itself and local communities

Verónica Chavez, President of the Community of Santuario Tres Pozos, Salinas Grandes, Jujuy, Argentina

Hear her voice



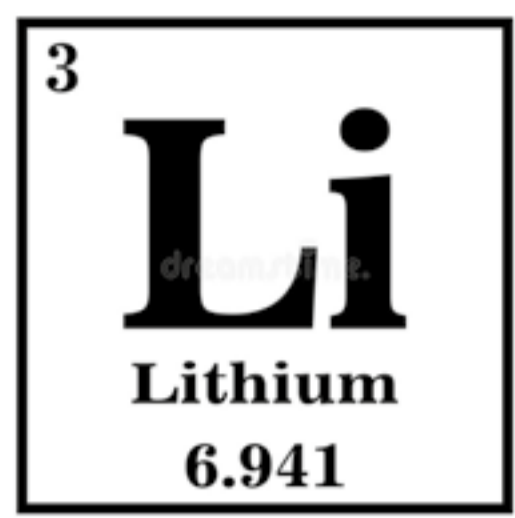
THE OWNERS OF LITHIUM IN ARGENTINA



Source: Solís, M. V., & Livonoff, E. (2023). Lithium and transparency in Argentina: Contributions from the BITI standard to 2 projects extracting lithium in Argentina. FUDOPAS and Red RUDO. Retrieved from https://fundapas.org/100-y-transparencia-en-argentina/

Claudia Aboaf

# A brief history of lithium



Traces of outer space in the salt flats, vibrant lithium was already being cared for by indigenous communities ten thousand years ago. About the supposed saviour in the energy transition and some disobediences infiltrating the global climate disaster landscape.

The world history of lithium recounts that this "silver-white pebble", which excites capitalism to such an extent, had a glorious introduction on the planet since the dense and hot Big Bang, the same event that leads Carl Sagan to affirm that we are stardust. Cosmology describes the great explosion that would begin the physical reality of the Earth, but it does not explain the unbridled voracity of one of the living animals to consume it and the continuous creation of mirages. Of the three elements that were synthesised on the planet, lithium settled in the South American salt flats, associated with bodies of water, in that rich soup of origin 13 million years ago.

Then, there was a long silence. No one knew of this vibrant, chemical element sleeping in the salt flats, nothing was said of its golden destiny in this present age of anthropocentric dementia.

In 1817, a young Swedish student infiltrated a laboratory, isolated the soft, silvery lithium for the first time and tried to cut it with a knife; that fragment coming from the island of Uto started the curiosity for the cosmic residue.

Then, in 1949, Dr. Cade, an Australian psychiatrist who had been a prisoner of war in a terrifying Japanese concentration camp, replaced electric shock therapies and lobotomies with lithium. He advertised "lithium salts for the treatment of psychotic excitement".

All of this brings us to discuss Catalano, the Argentinean scholar who explored the salt flats of the Andean high plateau in the 1920s – Dr. Bruno Fornillo, a member of collective Geopolítica y Bienes Comunes together with Melisa Argento, mentions him as he drives attentively to his selection of national rock music and the mountain road at 4100 m above sea level that we cross to return to San Salvador de Jujuy, after the art and activism meeting with the communities, convened by the Aerocene Community. Catalano, the rare metals enthusiast, explored the salt flats with a developmentalist vision. In the Salar del Hombre Muerto he imagined, during the Puna night, with his eyes full of stars, the "Argentinean plan of industrial mobilisation" to free the people from a "pest wave that spreads and breaks the chains of the foreign debt with the global North" and "to free the child from the clutches of those moulders of eunuchs, servants and slaves" by nationalising resources such as lithium for the people. But which people was Catalano talking about in his radical and pamphlet-like speeches?

It turns out that this vibrant, electrochemical matter, a vestige of outer space in the salt flats, was already being cared for by the indigenous peoples ten thousand years ago. And they are there now, even if the litieras in their outpost declare that there is no one there, only shadows in their nightmares. But everything that will happen, witnessed by the women defenders of the basin like Verónica Chaves, a community member from Santuario Tres Pozos (Jujuy), by the very sight of the llamas, by the presence of the cacti and the eyes of water, will be unforeseen, painful, as in a catastrophe.

"We thought that just by replacing oil and gas (fossil fuels) with clean energy (such as lithium and solar panels) we were already on a green planet living as we always have. But this transition does not come with a manual of answers," says researcher Maristella Svampa, a member of the Mirá socioambiental collective. "We have the voice of the people of the south and the energy transition has to be the opportunity for us to rethink the energy system thus far concentrated in large corporations, which has generated energy poverty and inequality. We need an energy system based on solidarity that implies, above all, a different link with nature."

We have discussed the "soft rock" that excites capitalism so much, tempers psychotic excitements and could calm the corporations that go to these locations to do their business in order to save themselves, where previously they led us to another mirage with oil. Lithium could temper the bipolar population in the throes of battery mania, memories deposited in their phones, or the surge of depression when their toys break and they are left crying like children. There are also the indigenous peoples who have access to some technology but still store most of their memories by talking to their ancestors in the ambient world of the high Andean wetlands of the Puna.

I previously stated that life, since "the primitive soup", made its way in different expressions and human living beings, always so intense, are only one among the species. Let us listen to what the rest of the living beings say here in the Salinas Grandes, in the style of Uexküll, the naturalist metaphysician, or Krenak, who never interrupted that inter-species conversation with the bodies of water when their "veins" are broken, in this case those of the basin, for the extraction of lithium. These vibrant matters, "non-things", will have some fainter voices, some annoying ones, like *Kachi, Halia*, salt, the root of Salarium, which was a symbolic good, a medium of exchange. Salt and salty, expanse of white beauty that withstands well a few cuts here and there in the salt blocks for the terrestrial companions. The hills, the Apu, naked of plants that it sees in its surrounding world, all mapped out, the landscape manhandled, in dispute of the mining belongings, all live in its skirt and under the guardianship of the communities. Laughter echoes on its slope because they say in assembly that the environmental lawyers are going to take a mountain to court; don't laugh because its spirit is going.

Now let's talk about Nature as a subject of rights, but above all about lithium and its right to remain in the rich soup. The mystery of lithium, that cosmic waste, the supposed saviour in the energy transition for a post-fossil world that never arrives. And the mining companies of the north who, on arrival, come up against the guardians of the *puña*, full of cosmic visions. Also of the intelligence of the mineral kingdom, of the chemical code of lithium that retains the energy memory but also of mirages, of consumption, of capitalist voracity. Of the commons. Let us talk about the water and the desertification of surrounding territories. Let's talk about a world that is excited about staying the same. And about Verónica, the community member, who greets *Pacha* in the morning and asks the *Mamita Salina* for help in the afternoon so that the mining companies don't come.

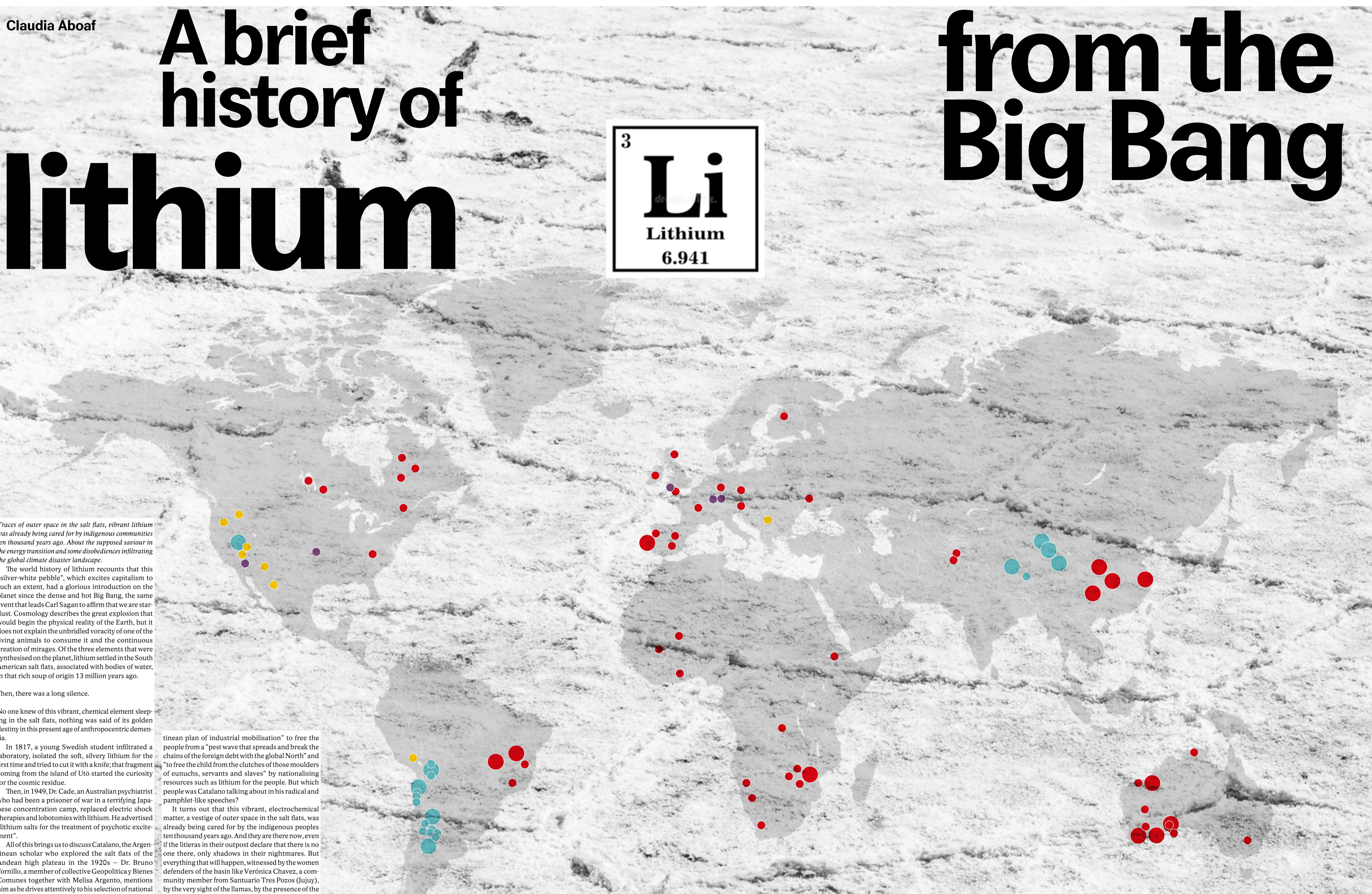
Some disobediences infiltrate this global panorama of climate disaster: the struggles in the territories and political self-organisation, the environmental lawyers such as Alicia Chalabe and Enrique Viale, but also some imaginative figurations that emerge such as the *Pacha* film made by Tomas Saraceno and Maxi Laina that began to form in 2020 in Jujuy during the project *Fly with Aerocene Pacha* and of Aerocene's aer-osolar sculptures, which already travelled together with the communities this past January

2023. They are designs that speculate on different flights above and below the earth. Flights without fossil fuels, that do not extract lithium from the salt flats. They are signs of possible futures, warning beacons, and ignited imaginations. Aerocene is a poetic tool and questions the technical destiny of humanity. Art, like literature, builds sensitive bridges to inhabit more complex worlds and ask ourselves whether we will be slaves to the instructions of this anthropocentric civilisation or free to speculate a different, inter-species, cosmic, communal flight. As Ursula K Le Guin said: "Resistance and change often begin with art".

I told you that the eye that looks at the beauty of the sky in turn looks within the eye that is stardust and extends outwards to configure the picture of the world. At some point we will have to look into the picture of the world and the dark side of this electric civilisation that is now coming for lithium.

# from the Big Bang

# to the Big Crash



Map of lithium extraction zones across the world as of November 2021. Source: Global lithium (Li) mines, deposits and occurrences (November 2021). British Geological Survey



Indigenous Communities of Salinas Grandes and Laguna de Guayatayoc demonstrate against ongoing lithium extraction, in January, 2020. Cuidemos la Pachamama - "Let's take care of Mother Earth"

# Fly with Aerocene Pacha

On January 25, 2020, the aerosolar sculpture *Aerocene Pacha* flew with a message "Water and Life are Worth More than Lithium", written with the Communities of Salinas Grandes and Laguna de Guayatayoc in Jujuy, Argentina, who are raising their voices in unison against harmful lithium extraction practices in northern Argentina. *Fly with Aerocene Pacha* stands in solidarity with them. Floating completely free from fossil fuels, batteries, lithium, solar panels, helium, and hydrogen, *Aerocene* pilot Leticia Noemi Marqués set 32 world records recognized by the Fédération Aéronautique Internationale (FAI). This achievement marks the most sustainable flight in human history and one of the most important experiments in the history of aviation.

While birds, seeds, spores and others have been flying sustainably for millennia – drifting with thermal currents – humans have only achieved this with – for example, paragliders and delta planes – for short distances and durations. *Aerocene* stands for an era where humans will evolve in the air as plants and other animals have evolved on water, learning to float and not fly, moving with the rivers of the wind. Might our dear interspecies friends welcome us in this stage of *Homo flotantis*?

There are two ways of flying: one follows the principles of aerodynamics. Airplanes, helicopters, and rockets, for example, have a greater density than the air. This kind of heavier-than-air aircraft does not depend on buoyancy for support but, instead, gains lift from aerodynamic forces. When, in 1891, Otto Lilienthal began flying gliders, he built a 10 meter tall tower to gain the necessary lift to drag ratio. In 1903, the Wright brothers used gasoline engines to power the propellers of Kitty Hawk, the first airplane. The Apollo XI mission to the moon in 1969 was powered by kerosene; whilst the Solar Impulse world circumnavigation from 2015 to 2016, used lithium polymer batteries charged by photovoltaic cells to generate the electricity that powered the motors.

The second way of flying follows the principles of aerostatics. In this case, lighter-than-air crafts like balloons and dirigibles, among others, rise and float into the atmosphere by establishing buoyancy, historically through the use of gases such as hydrogen or helium or hot air heated by a burner using propane and other fuels. When the Montgolfier brothers' hot air balloon lifted a human into the air for the first time in 1783, for example, they used fire to fly into the sky.

In contrast, in the record setting flight of *Aerocene Pacha*, Leticia achieved aerostatic lift-off using only air heated by the sun, and both sculpture and pilot floated for a record 16 minutes over a distance of 667.85 meters. The flight of *Aerocene Pacha* is one beyond the use of aerodynamics: this lighter-than-air vehicle lifts slowly in concert with the stillness-in-motion of aerostatics, with no fuel and no force. It is the hallmark of a new era, an era in which all co-inhabitants of the Earth recognize that we are onboard a shared planet, in a collective journey around itself and the sun.

Find out more about the flight of *Aerocene Pacha* and the *Aerocene* Foundation at [aerocene.org](http://aerocene.org)

Fly with *Aerocene Pacha* was produced by the *Aerocene* Foundation and Studio Tomás Saraceno. Supported by Connect, B7S, curated by Daehyang Lee. The *Aerocene* Foundation is made possible by the generous support of Espace Muraille Eric and Caroline Freymond.

## AEROCENE APP

This artwork invites you to move differently, floating with the rhythms of the planet. Become part of a community that changes habits, not the climate -towards an *Aerocene* era!

Incorporating real-time information from 16-day forecasts of wind speeds at different altitudes, the *Aerocene* App is a navigational tool used to plan journeys in the *Aerocene* era, bringing us closer to an alternative future where we move with the rhythms of the planet. Floating free from borders and fossil-fuels, we can lift off on our very own aerosolar journey guided only by the heat of the sun and the earth, and the air we all breathe. A digital gallery of Aeroglyphs – signatures in the air – chart the trajectories of the 7976 (and counting) virtual flights that have taken place so far on the *Aerocene* App.



Real Flights are recorded via an interactive global archive. The *Aerocene* community has launched numerous aerosolar sculptures lifted only by the sun and the air, carried only by the wind. Through the *Aerocene* app, you can connect with the *Aerocene* community to join a real flight or engage with the over 103 tethered, 16 free and 8 human *Aerocene* flights that have floated in more than 43 different countries. The App's new Augmented Reality functionality invites us to live an immersive experience by visualizing the invisible drawing made by an aerosolar sculpture as it flies. Visit the location of an *Aerocene* flight to see the trace of its trajectory, or place an archived one onto a chosen site, for a renewed way to sense the air and decolonize the earth from fossil fuel regimes.

## Aerocene Community

# Towards an era,

While fossil fuel based industries continue their attempts to colonise other planets, the air, this common interface of terrestrial life, continues to be compromised: carbon emissions fill the air, particulate matter floats inside our lungs while electromagnetic radiation envelops the earth, dictating the tempo of surveillance capitalism. This control held by the few enacts the suffering of the multi-species many in the current era of ecological crisis. This neocolonial extractivist logic now extends to the energy transition. In a cruel irony, the 'green rush' to mine lithium for batteries is polluting and reducing one of the Earth's most crucial elements: water. In the 21st century, lithium has become the new frontier of capitalist expansion.

A different era is needed, one which radically upturns fossil narratives of materiality, and re-examines the inscribed notions of property and properties, human and inhuman, of production and subjection. How would breathing feel in a post fossil fuel era? How can we challenge the dominance of dispossessing geopolitical forces, and overcome the extractive approach to Earth and the wealth of life it provides for? Together, we call for a this new era: *Aerocene*.

*Aerocene* is a proposal – a scene in, on, for, and with the air – towards a reciprocal alliance with the elements capable of restoring the air to a commonwealth of life.

*Aerocene* imagines space as a commons, a physical and imaginative place subtracted from corporate control and government surveillance.

*Aerocene* promotes de-securitized, free access to the atmosphere, through new tools and relational practices emerging from communities attempting to move the Earth's masses towards a post fossil fuel era.

This new era achieves lift-off through an aerosolar balloon, a Do It Together (DIT) entrance to the aerial, whose only non-engine is the wealth of energy gifted by the Sun. Once inflated with air and heated by the Sun, it elevates into the air, becoming a flying sculpture that rises without the use of fossil fuels, helium, hydrogen, solar panels, batteries or burners. In floating without carbon emissions, these aerosolar journeys speculate on the kinds of nomadic socio-political structures that may emerge if we could navigate the rivers of the atmosphere. This is to become airnomads, realizing, as wished by Rosi Braidotti, the "non fixity of boundaries and [to] develop a desire to go on trespassing". This is to move from Homo economicus to Homo flotantis: attuned to planetary rhythms, conscious of living with other humans and non-humans, and who floats with the ocean of air, uprooting dominant geo-centric logics towards embodying an ever more entangled relationship with the atmosphere and the cosmos.

In bearing the consequences of the fossil-capital regime's material practice of extraction, the atmosphere has become a highly stressed zone of the commonly composed terrestrial world. Aerodynamics, in constant movement and transformation, inherently entail complex spatial, temporal, socio-political and ecological processes, and today embodies the unequal relations of power projected upwards from the land.

Hegemonic modes of re-/production in the midst of the Capitalocene, along with human mobility and organisation within the web of life, has enacted the breach of atmospheric pollution thresholds, with CO<sub>2</sub> emissions now exceeding more than 400 ppm (Particulates Per Million). This corruption of the air is the trigger for state shifts in Earth's systems, the critical changes already under way, with planetary temperatures increasing and multifold inequalities proliferating in an age of resurgent nationalism and geopolitical instability.

Our attention to the air and what it carries was heightened in the midst of the COVID-19 epidemic. By wearing face-masks, we recognized the power of our breath; we also recognized that health is a collective measure, that in an interconnected world in which we are all musicians in a jam session, we must act in responsibility to the other. Environmental racism proved once again to have disastrous, deadly consequences during the COVID-19 crisis. Though inherently a virus cannot discriminate, the social systems in place can, and they guarantee that some will be infected while others will not and some will recover while others will not. COVID-19 was spoken of in terms of war; environmental racism is also, in a way, a war, with numerous casualties and countless battlegrounds. As Achille Mbembe wrote, "All these wars on life begin by taking away breath." As such, our attack response must be against "everything that condemns the majority of humankind to a premature cessation of breathing, everything that fundamentally attacks the respiratory tract, everything that, in the

long reign of capitalism, has constrained entire segments of the world population, entire races, to a difficult, panting breath and life of oppression."

What are the rights of pass, the corridors we need to open, in order to restore the right to drift and breathe? How can we overcome the paradox of decisions made by the few, simultaneously forcing and inhibiting the mobility and breathability of the multi-species many? *Aerocene* calls for an interplanetary ecology of practice which could reconnect with elemental sources of energy and the strata borne from the Sun and other planets, rising upwards – downwards and inwards – towards an era of renewed symbiotic relations and sensitivities within life's entanglements. We suggest a model for a landscape that balances and harnesses our relationship with the unlimited potential of the Sun. This realisation requires a thermodynamic leap of imagination, just like during an eclipse, when only in the absence of light do we become aware of our scale in the shadow of the cosmos.

Researchers in industrial and social ecology refer to 'socio-metabolic regimes' to define the epochal shifts in energetic relationships between humans and their environment, establishing a strict correlation between it and specific sets of social values. They argue that two of the main kinds of these regimes have been solar based, the ones of hunter-gatherer societies and those of agrarian. Despite the existence of societies that still embody such relationships with the sun – together with all the other species and life forms – they, and the conditions for

today's civilisational infrastructures, are threatened by the domination of the current socio-metabolic regime, the one based on fossil fuels, powering the Capitalocene.

This raises the urgency to rethink modes of being, and co-existence with the planet, and all our species share it with. What could be the fourth socio-metabolic regime? What are our varying response-abilities within the current crises of our social, mental and environmental ecologies under capitalism? What would be the new set of values necessary to drift us from the shadow sun of fossil capital, returning our socio-politically captured senses to that of the Earth, rather than the imaginaries of the global and national?

It may be through a rearticulation of our relationship with the Sun, air and cosmos that we open the boundaries of the Earth, to inhabit space with renewed interplanetary sensitivity, for this world and all others – free from borders, free from fossil fuels. Aeronauts, unite!



On the 25th of January 2020, 32 world records, recognised by FAI were set by *Aerocene*, with the message "Water and Life are Worth More than Lithium" written with Members of the Indigenous Communities of Salinas Grandes and Laguna de Guayatayoc and the *Aerocene* Community.

# Aerocenic

Some may think that these two messages are contradictory: that it is impossible to say "no to lithium mining" and simultaneously propose the transition to a society without fossil fuels, based on the use of clean and renewable energies. On the contrary. We need to address the issue: it is undeniable that lithium batteries (which are in our mobile phones, computers and are used to power electric cars) have a role to play in this transition – but there is no single path and the one adopted by our country is undoubtedly the wrong one.

We know that there are no smooth transitions, that the path will never be linear. Nor is there a manual, with questions and answers, especially given the large scale of the climate crisis. However, we cannot simply jump on the bandwagon of an unsustainable transition, like the one proposed in the Atacama salt flats (which extends to the entire national territory), associated with transnational corporations, based on the trampling of indigenous communities and supposedly leading to a "clean" energy model, but which reproduces the dominance over nature and populations. This would be an endorsement of a false solution.

Faced with the scenario of dispossession and plundering that has been configured in our country in relation to lithium, it is worth asking ourselves what kind of energy transition we are thinking about. In this aerocenic 21st century, in which ancestral, feminist and ecological struggles are our great sources of inspiration, it will be necessary to redefine and rethink a horizon for a fair transition, aiming at another system of social relations and another link with nature. After all, as the Climate Justice movements have been saying for a long time, the objective is to "Change the system, not the climate".

When art is made with talent and passion, it often opens a portal through which other possible worlds can be seen. In this way, what happened in the Salinas Grandes in Jujuy, on the 25th of January 2020, reveals the importance of art as a gateway to expand horizons, in these times of climate crisis, suicidal negationism and scarce political imagination.

The *Aerocene Pacha* project that included a talented, youthful community with cosmopolitan passions – was able to build bridges and links between very different worlds, focusing on dialogue, learning and the creation of trust. All of this was constructed in the magnificent setting of the Salinas Grandes, where so many blind spots and conflicts are expressed today.

One local and one global message were communicated by the artistic and cosmological project known as Aerocene. The first message was given by the Kolla communities, the ancestral voices that inhabit the salt flats and oppose lithium extraction, due to the unsustainable amounts of water it consumes, and thus threatens an already arid ecosystem. These communities are not only defined by their resistance to lithium mining; they defend other ways of understanding the territory – which are committed to conserving and keeping peace, based on a holistic vision of the relationship between human beings and nature. The message – that could be seen written on the Aerocene balloon – "water and life are worth more than lithium", contains more than just a rejection.

The second message is global and highlights as great protagonists women and the ecological fight. It was indeed a woman pilot, Leticia Marqu, who soared into the air and piloted the balloon that achieved a world record – without the help of fossil fuels, lithium and helium, using the air of the white salt flats, heated only by the sun. And it is a message to all of humanity, about the possibilities for us to think of social alternatives that do not threaten the very fabric of life itself.



A ceremony for Pachamama (Mother Earth) with Veronica Chavez from the Indigenous Communities of Salinas Grandes and Laguna de Guayatayoc, 2023. Photography: Florencia Montoya



2017, 2020, 2023 gatherings in Salinas Grandes and Laguna de Guayatayoc. Please visit:

Pictures by Florencia Montoya (\*)



# Struggles

# Notes on Aerocene

Tomás Saraceno

Humans have always dreamt of flying. But, today, flight has become a nightmare. 1.3 million people in the air at any given time, 1 billion tons of CO<sub>2</sub> released annually, 50% of aviation emissions, caused by 1% of the world's population. 80% of people have never travelled by aeroplane.

Let's float with another dream. Who dares to fly differently?

I have to confess that when the *Pachamama* ritual began, I was shedding tears of emotion behind my glasses. At the same time, I was nervous, the Wiphala (emblem of the Andean peoples of South America) was waving too much. The wind was blowing so strongly that I thought we were never going to take off. I could only think of all the friends and family who had come all the way here and would not be able to witness the performance. We were at an altitude of over 3600 metres and it was hard to breathe. My 10-year-old nephew Manuel kept throwing up. If I had known, I would have told him that a natural 'slow movement' was forcing us to walk differently. We were drifting together like the saying of the civil rights movement called for: move as slow as you can, as fast as you must.

"It's going to be alright," said Verónica from Santuario Tres Pozos. "The first thing is to thank *Pachamama*," Néstor and Rubén responded. Together with them, the original inhabitants of these lands shared their ancestral knowledge in a ritual of gratitude to the *Pachamama*, Mother Earth. The ceremony thanked the earth, the water, the sun and the moon with offerings, wishing good fortune for the day's flight. But the wind would not stop and, between too many words and a lack of concentration, I gave a welcome-speech that I'd rather forget. It was impossible to focus.

The weather forecasts predicted a lot of wind: the night before, a storm and thousands of lightning strikes had left us isolated. The river had grown too high, and it was not possible to cross it again. There was no way for me to warn the guests! In those territories there is very little telephone signal. We would have to predict the weather and communicate differently, rethink who our guests were. It is said in the Andean cultures, that when the body of the spider changes to blue, it announces rain. The meteorological-spiders, the weather inscribed in the clouds; it was other signs, for another kind of take-off, which we were looking for. We were looking for a trace, a time with no cell phone signal, but with other links, connecting us differently. In this region, you thank Mother Earth as part of the family, and so the ritual continued, with a confidence that I was mindful not to lose again.

From the experience gained in the previous weeks, and the previous decades, I knew that if we did not take off within the next 30 minutes, it would be impossible. I decided to ask everyone to start heading towards the launching site, and that's when I realised what a tide of people we were. It looked like a procession and the calm of walking on this white canvas began to strengthen me.

Before, the *queena* was not heard due to the wind; now we could hear it loud and clear. The wind had calmed down and the music was beginning to fill us with hope. *Tina Turn*, Father Sun, was shining on the horizon like never before. I was slowly realising, at an ever-increasing pace, that maybe it was indeed going to happen.

I was trying to control my emotions, while remembering what my mom was also probably thinking of: 10 years before, in a situation akin to this one, she saw me fall from a similar flying sculpture. It resulted in a broken back, two operations and over 12 screws in my spine. But this time it should be different. The experience healed us. Now we were much more prepared. *Aerocene Pacha* embodied 20 years of collective research and design, resulting in a safe vehicle, a sculpture, an aircraft that was still experimental but respected all precautions and certifications required by international organisations and controls. Nevertheless, Leticia was the only professional pilot in Argentina who accepted the challenge; she would be the first woman to fly only with the sun and the air, without burners, solar panels, helium or lithium.

Once at the launch site, the sculpture, specially made of black fabric to absorb the sun's heat, started to slowly inflate. *Aerocene Pacha*, impassive, was heating up and every second I thought, "let it rise, let the sun warm the air, before the wind gets too strong again and it doesn't allow us to take off".

But slowly, silently, called by the sun, Leticia started to walk at the speed of the wind. Step by step she was losing gravity, lifting off of our shoulders, into the ocean of air. She would slowly start to rise...and then come back down, but her steps were getting increasingly longer. At first, she would float just 10 centimetres above the ground, then 1 metre, 10 metres, until she reached an altitude of 176 metres and floated a distance of 1.7 kilometres for 21 minutes.

Tears and more emotion... "Go, Leticia, Go!". As the sculpture turned in the air, another message was made visible, maybe the most important one. "Water and life are worth more than lithium" was written in giant letters on the sculpture. This is the message of the indigenous communities who live in the surroundings of the Salinas Grandes and Laguna de Guaytayoc basin. Their struggle against lithium mining is a fight against a green energy transition occurring in the North, which is being primarily paid for by the peoples of the South. Their message stands for a different dream...

And so it was that *Aerocene Pacha* rose into the sky. We followed her incredulous, relieved, hopeful, in a shared magical moment.

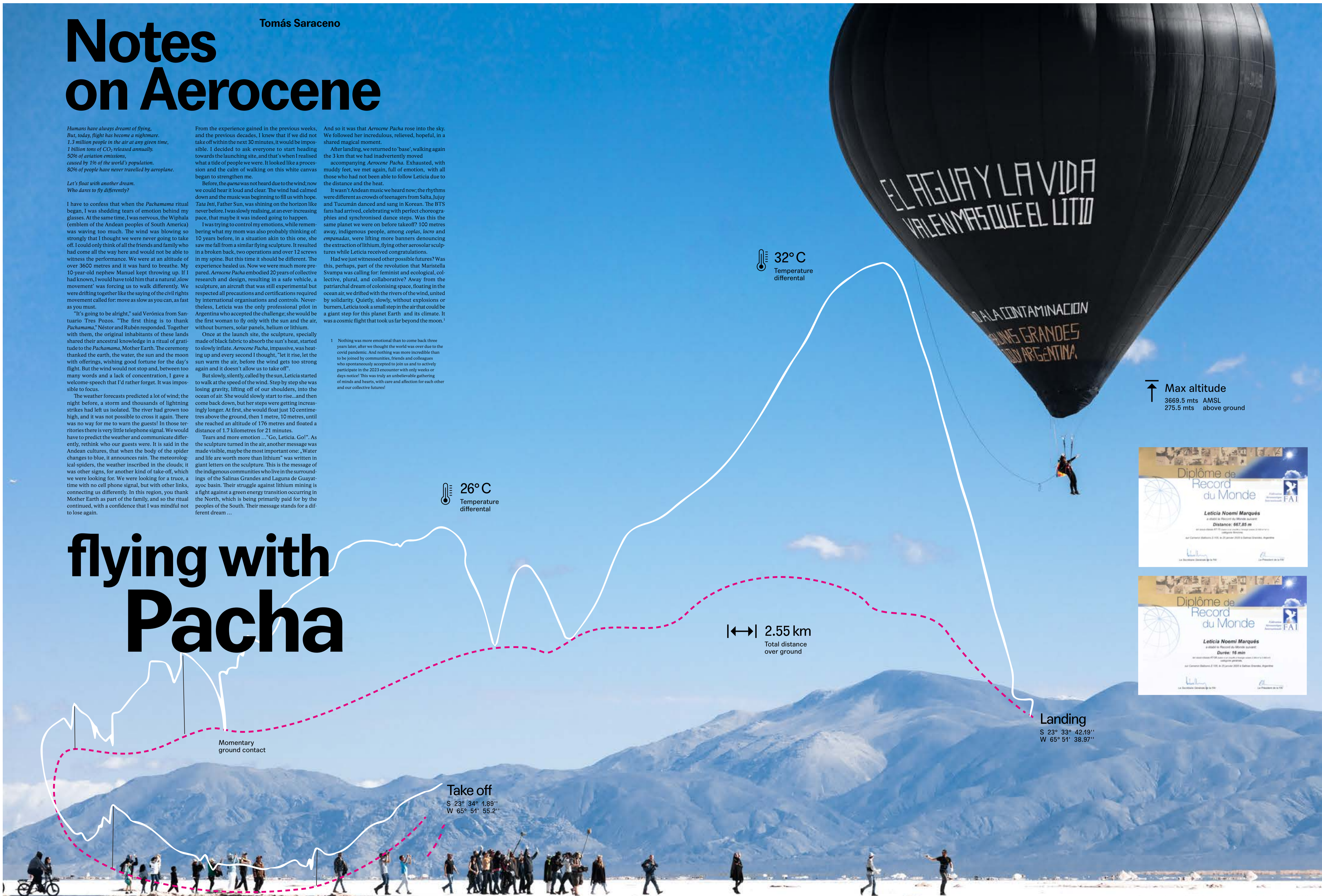
After landing, we returned to 'base', walking again the 3 km that we had inadvertently moved accompanying *Aerocene Pacha*. Exhausted, with muddy feet, we met again, full of emotion, with all those who had not been able to follow Leticia due to the distance and the heat.

It wasn't Andean music we heard now; the rhythms were different as crowds of teenagers from Salta, Jujuy and Tucumán danced and sang in Korean. The BTS fans had arrived, celebrating with perfect choreographies and synchronised dance steps. Was this the same planet we were on before takeoff? 100 metres away, indigenous people, among *copias*, *locro* and *empanadas*, were lifting more banners denouncing the extraction of lithium, flying other aerosolar sculptures while Leticia received congratulations.

Had we just witnessed other possible futures? Was this, perhaps, part of the revolution that Maristela Svampa was calling for: feminist and ecological, collective, plural, and collaborative? Away from the patriarchal dream of colonising space, floating in the ocean air, we drifted with the rivers of the wind, united by solidarity. Quietly, slowly, without explosions or burners, Leticia took a small step in the air that could be a giant step for this planet Earth and its climate. It was a cosmic flight that took us far beyond the moon.<sup>1</sup>

<sup>1</sup> Nothing was more emotional than to come back three years later, after we thought the world was over due to the covid pandemic. And nothing was more incredible than to be joined by communities, friends and colleagues who spontaneously accepted to join us and to actively participate in the 2023 encounter with only weeks or days notice! This was truly an unbelievable gathering of minds and hearts, with care and affection for each other and our collective futures!

# flying with Pacha



32°C  
Temperature differential

26°C  
Temperature differential

↑ Max altitude  
3669.5 mts AMSL  
275.5 mts above ground

↔ 2.55 km  
Total distance over ground

Momentary ground contact

Take off  
S 23° 34' 1.89"  
W 65° 51' 55.2"

Landing  
S 23° 33' 42.19"  
W 65° 51' 38.97"



From the performance Fly with *Pacha*, into the *Aerocene*. On the 25th of January 2020, 32 world records, recognised by FAI were set by *Aerocene* with Leticia Noemi Marques, flying with the message "Water and Life are Worth More than Lithium" written with Members of the Indigenous Communities of Salinas Grandes and Laguna de Guaytayoc and the *Aerocene* Community.

The Aerocene community in Berlin as part of Fridays for Future, 2019. Photography: Aerocene, Creative Commons BY-SA 4.0



Janine Randerson

# Lightness and gravity

Beneath the Salinas Grandes in Jujuy province luminescent, blue-green water swirls and eddies; in these fluid depths, adamantite minerals catalyse ancient forms of life in salt, silica and brine. These are the hidden waters of the *salar*, the living mother's body – Pachamama – much more than a salt-encrusted terrain. Above, buoyant clouds on atmospheric currents between the radiant sun and volcanic peaks mirror the subterranean unfurling of water below. For centuries the waterways and the wide-open skies overhead nourished the songs, plantings of potatoes, beans and salt harvest, and spiritual rites of the Andean communities who dwell here. Today, travellers from afar warm and whet their senses in this sun-blazed land, perforated with jewel-like pools. Yet the mineral residues beneath the high altitude lakes in Jujuy have also attracted miners for the rare silvery-white metal of lithium; the salt crust is now pierced by orthogonal cuts, the waters rerouted, and heavy machinery clangs in the air. To feel the bright light and dream of rising places us at an ethical crossroads between sustaining abiotic entities, biotic life and Indigenous human rights to life-fuelling water and the ecological calamity of 'green mining' for lithium. The people of this place say: *If our grandparents and ancestors lived without lithium, we can survive as well.*<sup>1</sup>

In the skies over the salt flats, an emissary of fuel-free, aerosolar flight is pushed up and up again into the currents by solar heat and many companioning hands. This air-filled, weather-borne balloon releases human bodies from the ties of gravity, that weighs heavily at high altitude, lifting the spirits and imaginings of the Aerocene community of Indigenous activists, aeronauts, artists, engineers. This collective has been woven together over many decades of communing, workshops and aerosolar flight experiments initiated by artist Tomás Saraceno. The territory of Salinas Grandes and Laguna de Guayatayoc in the north is cared for by over thirty communities including La Salina, Tres Pozos, Pozo Colorado and San Miguel del Colorado, and in the south by the community of Inti Killá de Tres Morros. *Aerocene Pacha* is named after a cosmological force, the space-time meeting of the subterranean, terrestrial and celestial realms of the Andean cosmos, binding the extensible beings and mineral reserves far beneath the Earth's surface with the birds and insects of the Earth's intimate atmosphere, then beyond to the distant reaches of the solar system.

The *Aerocene Pacha* balloon's lighter-than-air fabric captures ultraviolet rays of solar radiation inside its dark interior, warming the balloon's internal air temperature above the air outside. The albedo (surface reflectivity of sunlight) of the white salt flats creates warming currents that aerate the balloon, until the passenger floats aloft, as high as 300 metres in the air. While cars of plastic, metal, oil and lithium weigh heavily on the earth's beneficence in movements reigned by roads and borders, the balloon sails a gentle pennant of resistance. The perceptual horizon of the *salar* creates a shimmering mirror of the floating mobile, counterweighted by gravity's stabilizing pull back to our terrestrial origins. Like a softly feathered bird, the black balloon is an intermediary: between the earthly struggle for land and water sovereignty on the one hand – and on the other – far above the clamour of machinery, the lightness and contingency of the vagaries of the wind's currents, and the propelling heat of our closest star. In ancient Rome, grave political decisions were governed by observations of the flight and behaviours of birds. Philosopher Michel Serres describes the fine attunement of the Roman augurs, listening carefully to the birds, widening our perceptual window to the biophysical world, where language comes undone and the senses guide us.<sup>2</sup> The small bird poccocho of the Salinas Grandes sings and sings in fine weather yet it lies still as death when it is about to rain, foretelling the weather.<sup>3</sup> While in Māori cosmology, the appearance of birds is a *tohu*, a sign to take notice of the dead, a whispery medium of the *ātua*, the divine beings. The *Aerocene Pacha* balloon is a gentle cue to listen to the creatures and communities of Salinas Grandes, to adjust ourselves to the thermal currents and take heed of the new weathers, the infrequent rains, the anger of storms.

For many of us who live in cities, water spouts easily from taps, air circulates from temperature-controlled units, and commuting is cosseted by cars. The thin curve of breathable atmosphere has swiftly reached an untenable limit to absorb the carbon residue of oil and coal, and the tantalising promise of the E-revolution beckons as a tech-fix for the carbonized atmosphere. Yet the dark lithium batteries wedged beneath silent cars or lining our mobile phones and laptops comes with a cost for the rights of people, land, and our more-than-human relations. This new industry thirsts for water. The drilling and the evaporation process of lithium mining requires millions of gallons of water to wrestle the lithium from magnesium and other minerals. Few will ever see the violence of open drilling of the salt crust, or the pumping machinery that drinks voraciously from the salts waters of ancestor-bodies from groundwater basins. The lithium is left after evaporation, the springs dry out, with only contaminated residue left for those who dwell in the *salar*. Yet, if ever city-dwellers find the water is ceases from the taps at our homes, our fragile dependence on fundamental infrastructure leave us hopelessly exposed. Fossil-fuel-burning humanity habituated a fast pace of movement and consumption by wrenching up the oil of ancient forests and draining waterways. The same neo-colonial path continues with the gloss of emission-free, cut-pennant obscuring the effect of lithium mining on Indigenous lands and waters throughout the global 'South.'

From where I write in Aotearoa New Zealand, lithium prospecting in our geothermal regions is just beginning (also from a kind of fossil water or brine) in the heartland of Indigenous Māori lands around the Ohaaki silica field. We carry much of the burden of resourcing Euro-American dependencies even while we suffer disproportionately in tropical and subtropical regions in the Pacific. We are facing surges in cyclonic weather, and often catastrophic rains that overflow the tailings from mining into fresh water systems.<sup>4</sup> Nearby Australia supplies roughly half the world's lithium from the open-cut pegmatite deposits created in the collision of ancient landmasses. In many places, such as Cape York peninsula in Northern Queensland, the State prioritize mining venture capital's prospecting rights over Aboriginal land rights.<sup>5</sup> The parallel targeting of lithium beneath the earth by mining companies, and the governments who grant permits in the 'lithium triangle' across Argentina, Bolivia and Chile obscures or denies the impact of this water-intensive process in regions facing serious water scarcity. The associated mining of the Pacific ocean, around Nauru, for instance, for nickel and cobalt, on which many lithium-ion batteries depend, is also of grave concern for us.<sup>6</sup> Mining the seabed as 'mare nullius,' or outside of any country's jurisdiction, is no less contentious than terrestrial mining or filling the air with greenhouse gases. We have culturally imagined the Southern skies, seas, our salt lakes as untamed, unpeopled sites for commercial endeavour, while the wounded atmosphere, terrestrial and marine biome cry out against this fallacy.

Art-making often hovers at the untenable edge of energy technologies, inventing emergent models of kinetic movement, devising eccentric systems, new kinds of weather quasi-instruments and togethering moments of resistance. Energy exists in the quantifying language of neo-capitalist production as *resource*, however many artists engage energetic forces more openly as spiritual, cultural catalysts for eco-social change. Saraceno and the Aerocene community offer sun-powered flight as a manifesto, a provocation, an eco-poetic movement, and a rigorous experiment in just energy transition involving an international network of scientists, artists and engineers. They create

a new socio-metabolic regime, questioning the hierarchy of who has the right to exist and provide or be provided *with* energy. The Aerocene Manifesto asks: "What are the rights of pass, the corridors we need to open, in order to restore the right to drift and breathe? How can we overcome the paradox of decisions made by the few, simultaneously forcing and inhibiting the mobility and breathability of the multi-species many?"<sup>7</sup> To attend to the tangible effects of extracting the precious metals that lie deep in the earth, to listen to Indigenous voices is critical. For the people of the *salar*, the piercing of the land presents manifold effects on both human and natural systems. A zone of sacrifice is created in the South, in the words of Luis Martín-Cabrera, amounting to a "terricidio" or (earth-icide), and an end to a cultural way of being and knowing.<sup>8</sup> The weight of resistance to mining has been left to Indigenous communities of the South for far too long; now is the time for companioning hands.

We must decarbonize, yes, but *Aerocene Pacha* propels us to keep searching for viable solutions other than mining for lithium-ion batteries: let's alter our own habits of consumption and movement; let's revisit our own detritus of phones and batteries to retrieve the lithium in e-waste instead of further carving up the earth. In free-floating aerosolar flight, we feel the kinetic energy of motion, the elevating of imagination and spirit with the birds, from the weather-forecasting poccocho to the quiet strength of wings of the *Kuntur* (condor). This lightness and sensitivity to the atmospheric embrace, known so intimately by Indigenous communities and our avian companions, urges us to let the *salar* be; to let the salt flats exist, shimmer and fly into the light.

- 1 Virginia Vile, el Moreno community. *Pacha* 2020.
- 2 A film with the Aerocene community by Tomás Saraceno with Maximiliano Laina from the series *Fly* with Aerocene Pacha.
- 3 Michel Serres, *The Five Senses: a philosophy of mingled bodies*. Continuum 1985/2008, pp 99–100.
- 4 Virginia Vile and her father, el Moreno. *Pacha*. Film, 2020.
- 5 A venture capital firm has invested in the Aotearoa New Zealand company Geo40 to develop early-stage technology for lithium extraction from geothermal brine through synthetic means which they claim is less destructive than solar evaporation, but this is yet to be proved. Geo40, homepage: <https://geo40.com/geothermalium/>. Accessed March 2023.
- 6 Mining prospecting takes place in Cape York on Aboriginal freehold land, some of it managed by the Ojokoi Aboriginal Corporation, where traditional land owners have no decision making rights in the issuance of permits on these lands. Aidwatch. Case Study: Cape York, Queensland Australia. 2022. <https://aidwatch.org.au/case-studies/indigenous-land-rights-the-lithium rush/>.
- 7 Miller et al. "Challenging the Need for Deep Seabed Mining From the Perspective of Metal Demand, Biodiversity, Ecosystem Services, and Benefit Sharing." *Frontiers in Marine Science*, 29 July 2021. <https://www.frontiersin.org/articles/10.3389/fmars.2021.706161/full>
- 8 See: Aerocene Manifesto: Aeronauts Unite! 2019. The manifesto is an ongoing project that is collectively composed. It first emerged during ON AIR, carte blanche to Tomás Saraceno, Palais de Tokyo, 2018. Curated by Rebecca Lamarche-Vadel.
- 9 Luis Martín-Cabrera asserts: "the transformation of their lands into a 'zone of sacrifice' will amount to a 'terricidio' (earthicide), the end of a way of knowing the land/nature (epistemicide), the end of an ethnic group (genocide) and the end of an ecosystem (ecocide)." Luis Martín-Cabrera, *Indigenous Argentines Resist Becoming "Sacrifice Zone" for Ecocolonialism*. *TribalOut*, December 6, 2022. <https://tribalout.org/articles/indigenous-argentinians-resist-becoming-sacrifice-zone-for-ecocolonialism/>



# The resistance of indigenous communities against lithium extraction in a work of art in the Puna

We are inside the light: in the meadow of the llamas of Don Luis, surrounded by mountains, almost four thousand metres from the sea. The sky is light blue, light blue. And the rocks, partly orange. And here and there, there is a little green. With these three colours, and the silvery, celestial white, reflection and origin in the Big Bang, of the Salinas Grandes and Laguna de Guayatayoc basin, he manages everything. To shine with beauty and to live. When they come out of their pen, the llamas look at us with their round, big eyes, with their long and very arched eyelashes. One by one they come out and stare at us. They run towards the pasture and get lost to us. But not to Don Luis. He knows where they are even though they run in all directions, at full speed. I ask what those nylon bags are, hanging from the wires on a plot of land he fenced off. We go there and I also see a very elegant scarecrow. "It didn't work," laughs Don Luis. There are three or four bean plants left. "And how much does each plant yield?" asks the historian Bruno Fornillo. "Two tons", Don Luis answers seriously. He waits for the joke to sink in, looks at our faces, then bursts out laughing.

Sociologist Mari Stella Svampa, a specialist in socio-environmentalism, and political scientist Melisa Argento, one of the people who knows the most about lithium in the country, follow him. Claudia Aboaf, Argentina's foremost environmental science fiction writer, establishes crazy relationships between stars and animals.

And we are all inside a work of art. This – which is very real – is also part of a work: a sort of interspecies, intercultural and interdisciplinary performance led by the Aerocene community. Aerocene invited people from a wide range of disciplines to be there. The aforementioned, and also essayist Graciela Speranza, gallery owner Orly Benzacar, curator Inés Katzenstein, lawyers of the Asociación de Abogados Ambientalistas Gastón Chillier and Enrique Viale, scientists and space technicians and, of course, the most important people in this story: the Kolla and Atacama communities resisting the barbaric advance of lithium extraction in their territories, which they have inhabited for millennia in coexistence with all the other beings that conform this ecology. Verónica Chávez, president of the Santuario Tres Pozos community, a village in the basin, summarizes: "We have to defend ourselves from the abuse, there are communities here that want to live in peace just as much as the fox, the vicuña and the lizard".

"This is an artwork", I was saying, a work of relational art undertaken with an impressive imagination, engineering and poetics. We were all completely involved. We lived with the community in San Francisco de Alfarcito. We chatted, we were part of the workshops, we learned about their calm worldview, woven with the earth as life itself is woven, almost unbelievable given the voracious ferocity they have faced for over five hundred years, incredibly resilient.

We hear about the *apus*: the protective hills that are just as animated as we are. Before you think that such thinking might be magical, remember that "the markets" are spoken of daily as if they were gods. There is no doubt that the *apus* are more vital than the markets. We ate exquisite stews. We shared plates, cutlery, and jokes. We looked at the stars: dead cold, (the temperature drops a lot at night), we sat with our backs to the (very few) lights of the village and saw the glittering milky way, so full of stars and curved that, (Bruno Fornillo noticed it first), we felt the shape of the vault of the sky as the ancients must have perceived it, those from before light – and other – pollution. As it is still perceived by the people who

live in territories that have not yet been completely destroyed by the West, which never tires of spitting out the bones of everything it swallows. We saw Nebulae. The southern cross as an inescapable sign. Shooting stars. We all wanted to see some: our own, everyone's, whatever. We saw them. And then we entered the house to sing and dance together. How to tell the story of a gathering of people who, just hours before were all strangers, or almost strangers? How do I tell you that bridges flowed between each and every one of us?

Bridges of coming and going as if we were sailing in warm waters and, every now and then, bang, an embrace made of words or bodies dancing and singing or sharing things. Many things.

We brought back beautiful stories, like the one Levi, a writer from San Francisco de Alfarcito, told us, which his grandmother used to tell him: in the past, the *ojitos de agua* were very wild and swallowed the llamas of the salt caravans. There was one eye in the south and another in the north of the Salinas Grandes. Grandfather found out a way to retrieve the llamas with the salt load: he had to find a very fast horse, faster than water. He had to enter the northern eye running so fast that the horse's legs would beat the water and make bubbles. Until the bubbles appeared in the southern eye. And then they would expel the stray llamas. "Now," said Levi, "the little eyes are tame." "Of course," said Claudia Aboaf, "now everything wild, everything alive in this territory is at risk."

We attended the community assemblies – there were people from many Salinas villages in San Francisco de Alfarcito, the pre-Columbian location of the gathering – who took each decision by a show of hands, by consensus. This is how, after two days of workshops, the message of the aerial sculpture that the Aerocene community created for this event emerged: a balloon, or rather a rhombus, made of an ultra-light material that flies without burning or wasting anything. With the energy of the sun and the air. They had done it in the same salt flats in 2020: the aerosolar sculptures came and went in this almost transparent sky. And they achieved a lot of records: it was the first time that a certified balloon that uses no fuel – not, obviously, burns anything – flew in the Earth's sky. Operated by a woman.

Voted by the communities, the message for this year's balloon-rombo says: "In complementarity, we take care of the water". Complementarity: we are talking about a socio-ecosystem. For some, naming it an ecosystem might be to ignore the human societies that inhabit it. To call the land over which they advance like brutal conquerors a desert. A founding operation of our Argentine Nation. This is what the ruling party in Jujuy is doing when it decides to ignore the free, prior and informed consultation required by ILO Convention 169, to which the nation adheres. It must be noted that the national government does not seem concerned about Jujuy's government's decision.

Communities must give consent, or refuse, to what is done in their territories. Lithium mining is a huge drain on fresh water. In a context of drought. And in a socio-ecosystem of water scarcity. The underground flow of the water that comes from the mountain slopes are referred to as "veins" here. And they are right: the *salina* is alive and water is its blood. If you cut its veins, you kill it. When concessions are given to large international mining corporations, they are deciding to

sacrifice a territory. And its inhabitants. As the lawyer Enrique Viale says, an "el-doradist" vision: that ghost that has haunted Latin America since the conquest. That golden palace – raw material, commodity, staple products such as soy or oil, and of course, lithium – that will all of a sudden make us wealthy. This does not exist: GM soy with its poisons has not made us rich, Vaca Muerta has not made us rich, lithium is not going to make us rich. Moreover, the companies pay the province a mere 3% of the value at the surface of the mine – not to mention many of their accrued costs – in royalties on what, according to their own sworn declarations – they extract from the mines. Citizen, raise your hand if you would not appreciate paying taxes according to your own income tax returns, without further control. Well, the mining companies do. And they pay the national government an even more ridiculous 1%. This does not have to be the case. You cannot decide to destroy a territory over the will of the people who have inhabited it for millennia. You cannot blithely decide to sacrifice the other. And the other has been the same for more than five hundred years: the indigenous people. The right to health and to a healthy environment, among other human rights, as lawyer Gastón Chillier pointed out at the meeting, are among the first to be violated by extractivist companies and the governments that support them.

And there we were all together. We saw the premiere of *Pacha*, the film that Tomás Saraceno directed with Maxi Laina. It is an open, endless, collaborative film. Like this very meeting. Like the ceremony of offering to the *Pachamama* in the mornings, in the bitter cold, in the bright air, asking *Pacha* for the strength to continue the dialogue and the resistance.

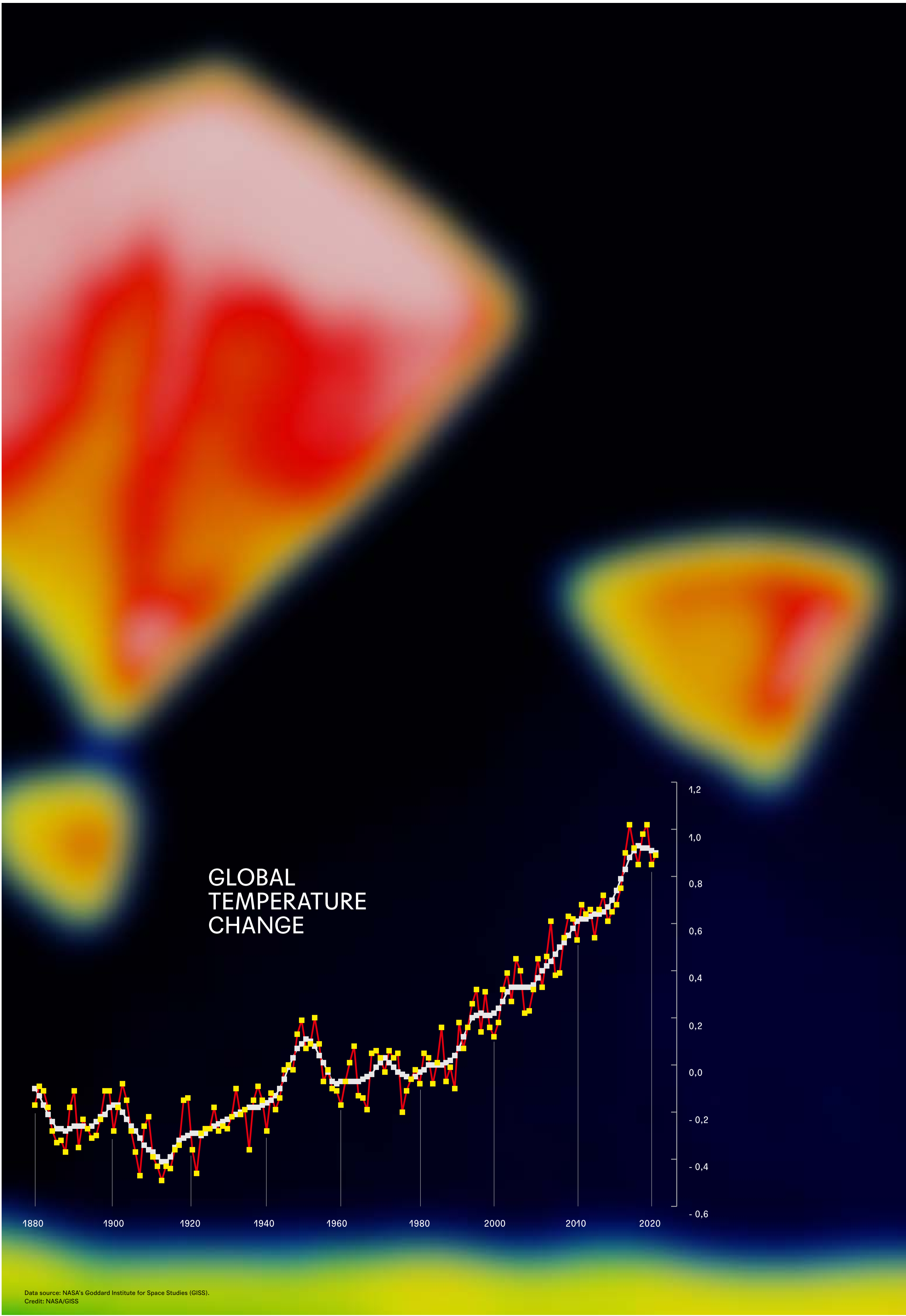
Find an ongoing repository of the 2023 gathering in San Francisco de Alfarcito and the fight of the Communities of Salinas Grandes and Laguna de Guayatayoc using this QR



Ernestine Alejo  
Alfarcito, January 2023.  
Photography by Florencia  
Montoya

Hear her voice





Graciela Speranza

# From Greta Thunberg to Aerocene in Salinas Grandes

The image on the cover of Greta Thunberg's *The Climate Book* is enough to gauge the scale of the disaster. A series of vertical stripes show the progressive rise in global temperatures from 1654 to 2021, in resemblance to what could be a colorful Agnes Martin, the collective work of humanity's feverish growth over the past decades. Each of the stripes indicates the average temperature of a year, from the deep blue of the first, coldest years to the deep red of the last. These are the warming stripes, created by Ed Hawkins at the University of Reading to show at a glance the unmistakable progress of global warming. They can be downloaded for free from [showyourstripes.info](https://www.showyourstripes.info), including those of Argentina, an abstract picture of the disaster that we too, aided by the countries of the North, were able to achieve.

The image is irrefutable but only the trigger for a tenacious crusade that now comes in the form of a book, a "Climate Bible", polyphonic howl of a hurting world. "We tell it like it is," Greta writes in one of the forewords that open each section, because she believes that not only are we unaware of the emergency, but we have not realised that we are unaware, a double capital fault that can only be repaired with clear and accurate information. The story she wants to tell – "the world's biggest story" – could start with a couple of alarming figures. Average global temperatures have risen by 1.2°C since pre-industrial times, and although in the 2015 Paris Agreement almost every country in the world committed to limit warming to below 2°C (ideally below 1.5°C), the UN Intergovernmental Panel on Climate Change (IPCC) estimates that, with current policies, it will reach 3.2°C by 2100. In defiance of expert warnings (by the late 1970s there was already scientific consensus on

increasing global warming), annual carbon emissions since 1991 have exceeded those of the rest of human history. The explosive growth of the 20th century tripled the world's post-World War II population, quadrupled water consumption, increased marine fish catches sevenfold and fertiliser consumption tenfold. And while the whole world suffers the consequences, we are not all equally responsible. The greatest population growth was in the global South and most of the consumption was driven by the United States and Europe. The richest 10% of the world's population causes 50% of our carbon emissions, more than double the emissions of the poorest half of the world.

We do not know the end of the story, but science does its best to remind us that there have been five mass extinctions in the last half a billion years, each in turn wiping out three quarters of the planet's species, and we are blindly heading towards a sixth, the first caused by a biological agent, humans, the drivers of "infinite growth on a finite planet".

From this account, it becomes clear that in the light of a multidimensional crisis, solutions will have to be collective but also individual. The critical tipping point for changing individual behaviour, sociology points out, is a committed minority of 25%; popular protest, activism and environmental movements, especially of young people and women, are trying to reach it in defiance of the silence of the mass media. "If I were asked which industry is most responsible for the destruction of life on the planet," writes George Monbiot, writer and columnist for *The Guardian*, "I would say the media". Through their complicity, their blindness, or their idleness, "they are the engine of persuasion that allows the system of destruction of the Earth to persist". It is therefore necessary to demand clear environmental platforms from political parties, but also to refocus the world's attention, gaining space in the mainstream media and redoubling efforts in alternative media, seeking new channels and encouraging new collective enterprises. *El gato y la caña*, for example, a platform for scientific research and dissemination created by a collective of young Argentines to generate public communication content on science in digital media – "more science, in more places, for more people" – and a collection of books, also available free of charge. In tune with Greta's initiative, the latest, *Clima*, made openly and communally, convened a group of scientists, economists and activists, to tell "the biggest design challenge of all time" from a regional perspective.

However, individual will alone is not enough to implement fair and equitable climate mitigation and renaturalisation. Environmental biologist Robin Wall Kimmerer proposes "aligning economies with the laws of nature" and reminds us that "ecology" and "economy" share the same Greek root, *oikos*, meaning "house". There will be no decarbonisation without a profound redistribution of wealth. Thomas Piketty asserts, and proposes creative solutions: "A modest global wealth tax on billionaires with a pollution surcharge could generate 1.7% of global revenues, which could finance most of the additional investments needed per year to cover climate mitigation efforts". The proposal is sensible in an absurdly unequal world, but it will not be easy to stand up to the voracity and social deafness of the big corporations.

In the discourse of politics, economics and sometimes even science, a narrow pragmatism reigns, incapable of imagining what is to come, art does not conform to this impoverished version of realism; it gives material and visible entity to metaphors, reveals the limits of the imagination and makes realistic fantasies that at first sight are impracticable.

This is what happens in the practice of the Aerocene community who for years has been undertaking networked projects ("doing something", Tomás Saraceno says, "that none of us could do alone"), in which the frontiers between science, technique, social theory and art are diluted like the horizon line of the Salar de Uyuni, where their first balloons flew, until they are recomposed in a fluid practice that is its own odyssey of space and perhaps its redefinition of art in the 21st century. In January 2020, a woman flew freely in a balloon for 16 minutes without the use of fossil fuels, helium or lithium, over the white sea of Salinas Grandes in the province of Jujuy. *Fly with Aerocene Pacha* broke 32 records with the most sustainable flight in human history, carrying the message proposed by the indigenous communities, who for more than a decade have been fighting for their rights

in the face of resource extraction in the region: "Water and life are worth more than lithium". The feat was documented in the film *Pacha*, which three years later, in mid-January, was screened in front of many of the protagonists in San Francisco de Alfarcito, a village of less than a hundred inhabitants, nestled in the clouds on the high plateau of Jujuy at an altitude of 3,500 metres above sea level.

There, the Aerocene community brought together environmental lawyers, human rights and nature rights activists, geopolitical and commons experts, writers and academic specialists in the region's conflicts with a large group of representatives of the indigenous communities of Salinas Grandes and Laguna de Guayatayoc, to strengthen the defence of the territory, subjugated by extractivism with a high environmental impact, doubly strengthened by the global demand for lithium that promises to implement electromobility. The way it is, with very little return for the country, a paradoxical "green colonialism" that will only benefit the energy transition of the North, degrades ecosystems and the dwindling resources of the people. It is time to imagine ways for our energy transition with fair and democratic strategic planning, attentive to environmental impact. On the parched football pitch in Alfarcito, one of Aerocene's aerosolar sculptures took flight this time with a new message, epitome of the synergy of the debates: "In complementarity, we take care of water". But can art really redesign the future?

A clear example of what the Chinese philosopher Yuk Hui calls "cosmotectonics", the work of the Aerocene community aspires to a historically, cosmologically and locally situated technology. It does not want to push the boundaries of art at the expense of technique, but the idea relies on encouraging a more ambitious and promising dialogue. Since modernity, we have been thinking about how new media has changed the languages of art, but their interdisciplinary projects have raised a more important question and some inspiring answers: how can the imagination of art transform technology? For example, by preserving that moving continuum of earth and air of the salt flats, fragile remnants of a sublime landscape that indigenous communities have preserved for thousands of years?

According to *The Climate Book*, Indigenous peoples make up only 5% of the global population and occupy less than a third of the planet's territories, yet they are responsible for preserving 80% of the Earth's diversity. On the thirsty altiplano of the Puna, they continue to guard the water and salt flats, in immemorial harmony with the starry sky, llamas, vicuñas, cacti and a few olive trees.



Thermal picture of Aerosolar sculptures that are able to rise off the ground because of variations in air temperature and density. Helped by the black color of the envelope, they float when the air inside their envelope is heated only by the sun to a temperature higher than the air outside. A thermodynamic journey

# The way it is

# Challenging the future

The blind glare of the narratives surrounding lithium is expanding at enormous speed, obscuring the social and environmental impacts it represents for our Latin America.

Without a doubt, the world must abandon the fossil pattern of predatory consumption of nature and life. So must the hyper-materialised and disposable patterns of consumption of goods, the economic concentration of capital and the imperial lifestyles favoured by an unequal energy system. What is really at stake, however, is what this new world will look like, and so far we are not winning this battle of meaning. Based on the decarbonisation of national economies and the reduction of greenhouse gas emissions through carbon markets, global agendas for the energy transition are developing a new global techno-corporate regime. It is a new green, neo-colonial and extractivist pact that, among its goals, has the replacement of infrastructure for "renewable" energy and an electromobility industry for mass consumption. In fact, the increase in sales of hybrid and/or electric vehicles would rise from just over 3 million today to 26 million by 2030 and 54 million by 2040. Simultaneously, the electronics industry of mobile phones, notebooks and tablets (which are in fact disposable), has grown to exorbitant levels.

We are witnessing a territorial war, the growing expansion of the lithium extractive frontier and another set of "critical elements for the transition" (World Bank Report, 2020). The economic concentration around the appropriation of lithium, as well as the inter-imperial struggle for the control of knowledge and patents, are part of a geopolitical dispute (CyBC, 2019) that nowadays even leads to the militarisation of areas considered "frontiers" for capital. Global powers and corporations all set their sights on the historic "backyard" of their interests, as Laura Richardson, head of the US Southern Command, recently, unashamedly, stated (Página 12, 2023). Green capitalism is today's pattern of accumulation. To give just a couple of examples, the company Tesla increased its market capitalisation by 700% in 2020. China controls 50 percent of the world's production of electromobility, it is the main producer and market for solar panels, windmills, hydropower, nuclear energy. All the most important investment funds in the world are dividing the territories and salt flats of Argentina and Chile, where lithium is found, like a chessboard, as are the most important car manufacturers in the world (Toyota, BMW, VW, Nissan, General Motors, Audi, BAIC, and the giants Tesla and B&D). Electronic firms such as Samsung, Panasonic, Huawei and Apple, and stationary storage companies such as Vestas, LG Chem and General Electric. This is a dynamic that we have called "accumulation by defossilisation and dispossession" (Argento Slipak and Puente, 2022), a race for control of resources, patents and knowledge, in conditions of socio-ecological and civilisational crisis.

Argentina, Chile and Bolivia possess 53% of the global reserves and about 58% of the resources (USGD, 2021) of lithium in their high Andean salt flats. This has turned the historic socio-cultural region of Atacama (Argentina, Chile and Bolivia) into the misnamed "Lithium Triangle", a territory reinvented for capital. The projected image is of a new desert, built as a quarry of "resources" waiting to be "discovered". Just as it was more than five centuries ago. Colonialism and renewed dependency that operates

by deepening social and environmental inequalities and injustices and ecological-distributive conflicts, transferring socio-environmental costs, violating rights and dispossessing populations.

At opposite ends of the spectrum and in completely different socio-state frameworks, Chile and Bolivia share one thing in common, and that is that the state is in charge of lithium and considers it a strategic resource. Although considering it strategic in itself is not enough. Chile is the world's second largest exporter after Australia, with more than four decades of monopolistic over-exploitation of this resource in the Salar de Atacama by the firms SQM and Albemarle. In this country, lithium was declared strategic in the 1970s, leaving the negotiation of contracts in the hands of the state through central institutions such as CORFO, in the framework of the expansion of neoliberal regulations. While in 2015 a National Lithium Commission made proposals aimed at increasing the capture of income and reparations for the affected populations, the extension of the duration of the contracts and the advance of the lithium mining frontier towards new salt flats perpetuate the features of a primarily export-oriented profile, with the framework of neoliberal policies and a historically subsidiary state. With an extraordinary increase in exports over the last year, the Boric government has just presented its National Strategy for lithium, including planning, value addition, and with majority State participation. However, the truth is that this is proposed with a public-private shareholder composition, where active projects are not touched until their completion in 2030 and 2043 (SQM and Albemarle respectively), expanding mining activity with state control to other salt flats. So, its real disruptive capacity with what has been done so far will depend on the future regulation of these announcements.

Bolivia is undoubtedly the country that tried to break away from the colonial and dependent horizon around lithium. In 2009, a sovereign policy was promoted that declared the state to be the owner of the evaporite resources in the Uyuni salt flat (the largest in the region). Emanating from organisations and movements in the Potosi region and presented to the MAS at the beginning of its term, the three-stage plan was supposed to lead to the production of Bolivian lithium batteries. However, persistent difficulties with the extraction technique in climatic conditions different from those of neighbouring countries and varying degrees of concentration of lithium in brine delayed the deadlines and the expected profits for the country for a long time, and generated many conflicts with the Potosi region, which is demanding an increase in royalties on the resources located in its territories. Political pressures were external: from the reluctance of corporations with the necessary know-how to accept sovereign turnkey terms for the development of plants, to pressure on Bolivia to relax the terms of negotiations with transnational capital. After the total interruption of the project under the de facto government of Evo Morales, the policy of the current Arce government encourages the goal of exporting lithium even at the cost of opening up to transnational capital. To this end, it has signed an agreement with a Chinese conglomerate for the construction of two industrial complexes using the direct extraction technique (ELD). Argentina is a poor example of deregulation, lack of perspective and political will, of "laissez-faire". Argentina has the most favourable regulatory framework

for transnational capital: the provincialisation of resources sanctioned in 1994, the Mining Code that governs the activity and the Mining Investment Law of 1993, consolidate the plundering of lithium in the country without any specific regulation whatsoever. The extractive companies and corporations must contribute only 3% of the value at the surface of the mine (the value declared by these same firms) to the provinces, and some have even lowered this margin. Capital logic puts pressure on the provinces to compete with each other to make themselves more "attractive" for the investments involved in extractive projects. All this leads to the relaxation of regulatory controls not only in economic terms, but also in terms of environmental impacts and permits for water use.

At present, Argentina has only two projects in the extraction stage: That of the North American Livent, which began its exploitation in the 1990s on the Salar de Hombre Muerto. And the one of Sales de Jujuy in the province of the same name (formerly Orocobre now Allkem of Australia), Toyota (Japan) and JEMSE (Jujuy), which began its extraction from the Olaroz salt flat in 2015 and is in the expansion stage towards almost doubling its capacity. The third is Minera Exar (Jujuy) with a project under construction in the Cauchari salt flat (with shareholders from China's Ganfeng Lithium, Canada's Lithium Americas and a small participation from JEMSE). However, there are about 50 projects in previous stages all over the country, and not only in the puna where all the salt flats are distributed, but in other provinces and regions, even in Patagonia. Today the country exports 40,000 tons of lithium carbonate, but the intention is to increase this figure to more than 300,000 tons, without any comprehensive and cumulative environmental study on what it would mean to increase this extractive figure.

Lithium mining is water mining, which, in the projected quantities, operates at the risk of water stress, the possible salinisation of fresh groundwater and/or the drying up of natural "ojos de agua", the water sources for life in an ecosystem that is characterised by its fragility. Estimated water use for this mining ranges from 2 million liters of water per tonne of lithium carbonate to 5 million in cases that vary from project to project (due to the conditions of each salt flat, the degree of concentration of the mineral, and the technique used).

There is no future in lithium extractivism. The populations and communities that inhabit the salt flats and have resisted historical racism since colonial times, as well as the formation of the nation state, are the main victims affected by lithium mining. Pre-existing productive economic activities, work linked to salt extraction, agriculture and animal husbandry are destroyed, violating the relational modes

of care with nature, ancestral knowledge and know-how, identities and bodies that resist and re-exist on a daily basis. Nurturing is one of the axes that articulates resistance to the relentless expansion of capital accumulation. The defence of the water-life territory expresses an integral understanding of the basins and their brine, lagoons, meadows and wetlands. These wetlands are a reservoir of knowledge and wisdom on the survival of species and human life in extreme conditions, water regulators shaped by slow and natural cycles, carbon sinks. Thus, their defence is articulated in the socio-environmental struggles that demand the sanction of the #Wetlands Law Now! in Argentina. The Kolla and Atacameño communities of Salinas Grandes and Laguna de Guayatayoc, who have been defending their territories for more than ten years, are well aware of this. "Water is worth more than lithium" they say, "We don't eat batteries" they affirm, and in these messages of struggle they express the most radical universal criticism of a transition that is being conceived solely for the global powers. These are indigenous-rural communities who demand respect for territorial self-determination as a democratic logic of recognition as the ancestral inhabitants of these territories. They reject corporate interventions of organisational fragmentation or "weak participationism," and fight for forms of self-determination. They maintain the defence of water and salt flats as a collective good, and understand the integral territory as hydro-social basins. In their struggles, they demand to be consulted in accordance with the Free, Prior and Informed Consultation that governs ILO Convention 169 and for the respect of all the constitutional indigenous rights systematically violated in the country. They demand the implementation of environmental impact studies on their territory, and demand compliance with environmental regulations. They propose logics based on an ecology of knowledges, which recognises, studies and endorses local learnings, experiences and expertise.

Their struggles are linked to a number of territories affected by lithium mining in Antofagasta de la Sierra in Catamarca, as well as in the Atacama and Copiapó regions in Chile, along with Likanantay and Colla communities, actors and socio-environmental assemblies in these territories, and movements that propose the defence of water basins and high Andean salt flats and wetlands. It is in the articulation of their proposals, and with those emerging from a range of other socio-environmental movements, rural urban popular sectors, feminisms, ecofeminisms and young people's activism, that we find the keys to the movements for social and environmental justice, or the alternatives towards a just and peaceful socio-ecological transition.

# Resistance to predatory colonial lithium extractivism

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2017, 2020, 2023 gatherings in Salinas Grandes and Laguna de Guayatayoc Please visit:

Pictures by Florencia Montoya (\*), Alejo di Rialo (\*\*\*) and Maria Laura Monti (\*\*\*)



# The *Puna* is not a Triangle

On a personal note, the most important aspect I've noticed was how mental ecologies have deteriorated across the *Salar's* communities. Little academic attention has been dedicated to the entanglement of social material and mental ecologies, be it in the Atacama or at large. And even less on the mental and psychological impacts of extractivism. And yet it is undeniable. Extractivist mental pollution is manifest in prevailing suspicion and intra-community conflicts centred on differing relations to mining companies. There are multiple reasons for this: sometimes it's a matter of differing positions on the buying of land by mining companies; sometimes it's the result of the direct impacts of extraction over agricultural modes of existence; other times it is due to the heavy burden of contesting extractivism; and frequently it is a problem of deciding on compensations, seen by some as a lesser evil and the opportunity to benefit at least in some aspect from a dire situation, and by others, as a betrayal to the struggle for the protection of ancestral territories. All these aspects are magnified by both state and mining companies' political and financial pressure over local leaders and representatives. In the Atacama as in every other area of resource extraction, the arrival of mining signals a drastic reduction in the range of possible futures, a trauma that is both to the environment as it is to its peoples.

This project came to an end in 2022. And yet, it highlighted the importance of resisting the multiplication of 'lithium triangles' across the world. The Atacama is one among many other territories across the world that stand in the frontlines of a mode of development from which those affected stand to gain very little. For the past couple of years, I have engaged in similar struggles in the north of Portugal, where I am from, and where several lithium mining projects are threatening unique ancestral environments. While too much focus on lithium might miss the forest for the trees (the real problem is the capitalist dependency on extractivism, and lithium is only one among many other metals needed for the current 'transition') I note how the hypocrisy with which it is marketed as 'green & clean' has led many people to join the struggle. Many across the world are increasingly 'speaking truth to power' regarding the cynicism of a 'green transition' that is led by extractive businesses instead of real environmental or climate concerns. The recently signed Jadar Declaration by Serbian, Chilean, Argentinian, Portuguese and US based environmentalist groups speaks to the importance of international alliances. But there is much more that needs to be done.

As a researcher my objectivity does not rely on some sort of neutral detachment, but on taking a clear stand. We urgently need the many worlds of the world making common cause if we are to resist the digging machines of capitalism. Extractivism is constantly inventing 'lithium triangles' and similar pseudogeographies to justify the creation of sacrifice zones. But these are real environments, inhabited by many different beings and forms of life, be it microbial, vegetable or human, ancestral, earthly or celestial. The *desert* is not a triangle; *Uyuni* is not a triangle, and surely the *Puna de Atacama* is not a triangle.



D. Raul Chinchilla, at his farm in Beter, San Pedro de Atacama. Godofredo Enes Pereira, 2019

extraction are taking place in the driest desert in the world. And across the region, lithium extraction is expanding into dozens of other *salares* – including Salar de Uyuni in Bolivia, containing the largest resources of lithium in the world, and whose government recently signed (January 2023) a deal for lithium extraction with a consortium led by CATL, the world's largest battery manufacturer. Following from silver, gold, nitrate and copper, lithium continues the long history of extraction in the Atacama.

Governments and mining companies have historically described the desert as empty – *despoblado* – occupied only by small groups of 'underdeveloped' or 'primitive' peoples. That such depictions and their explicit racism are aimed at easing the processes of land appropriation for the extraction of resources is abundantly clear. The desert has always been the most exaggerated figure of the colonial-extractive gaze, a world described as inhuman, the presupposed impossibility of inhabitation justifying its role as a sacrificial zone. In my mind it is obvious how in its pure geometric construction, the idea of a 'lithium triangle' captures the essence of colonial plunder: the projection of the extractive gaze over territories and communities, a pure geometry that sees as much as it 'unsees', that in the same gesture of extirpating precious riches, bringing them from below, erases all those others it considers un-precious, be human or other, made inanimate, inhuman, invisible, irrelevant.

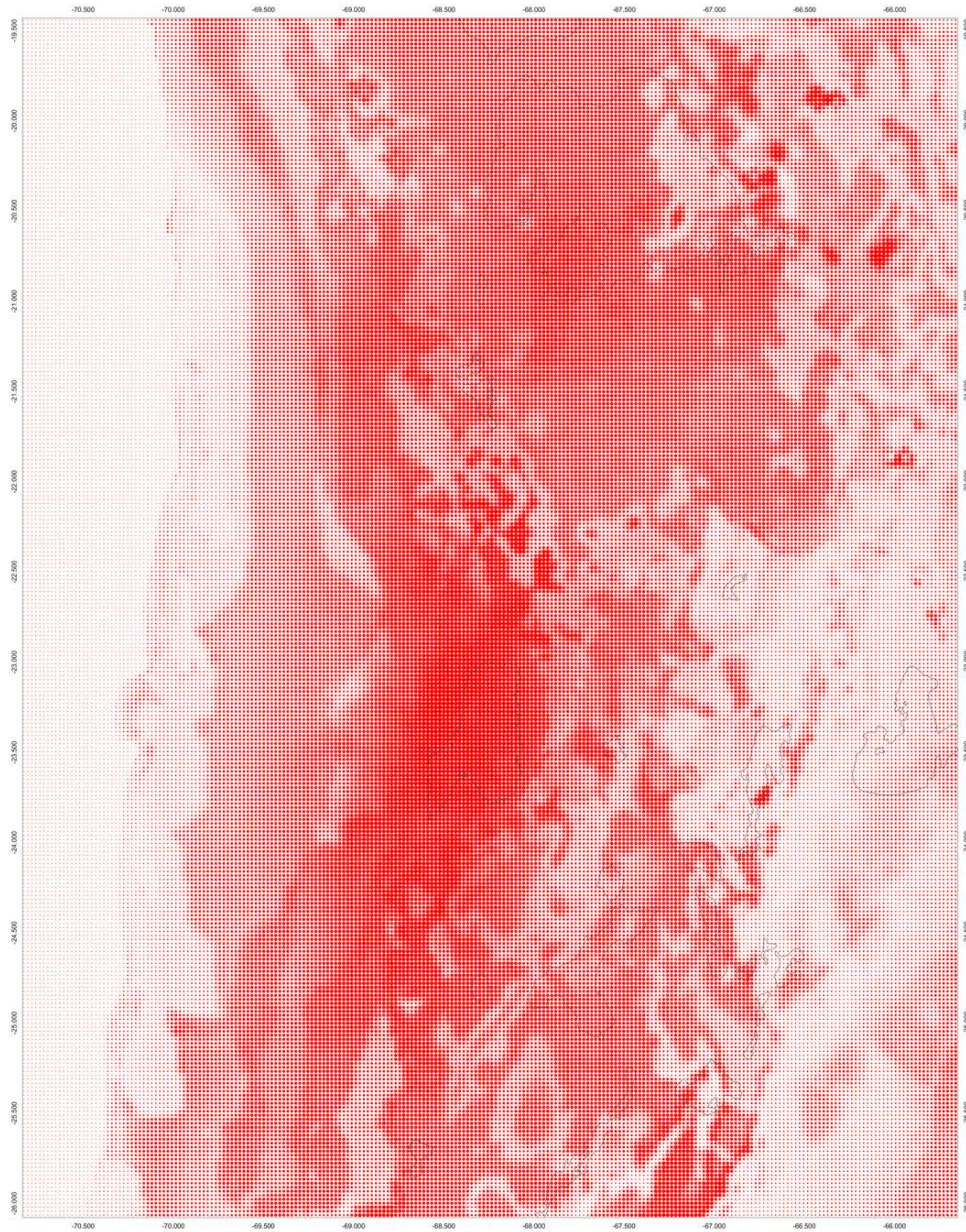
While the studio's broader investigation has looked at lithium across local and global scales, both contemporary and historical, design efforts focused on strategies to take back the land from the control of mining corporations. Our collaborations with advocacy teams and indigenous organisations explored architectures of environmental sensing and monitoring to be used by locals against mining companies. Drawing on the expanding field of counter-mapping as well as on the emerging forensic approach to architectural activism, in its first stage, the project made use of remote-sensing, multispectral analysis and GIS to produce reports on environmental change to be used in legal disputes. We equally proposed tools to allow ground observations to be interpreted in relation to invisible data such as concession boundaries, aquifer location, soil depth, real-time measurements of water and wind, and vegetation health in time.

Many of our students suggested collaborative devices to bring data together, including online platforms, apps, and AR systems. We explored how these might enter into composition with non-academic modes of knowledge production, including oral histories, environmental knowledge from farmers, and *Atacameño* knowledge traditions of reciprocity, care and respect for the ancestors. The other key component of the work was to complement struggles for land with proposals for environmental care and maintenance. In collaboration with the *ayllus* of Tular and Beter, San Pedro de Atacama, we redeployed conceptual and practical aspects of *Atacameño* environmental thinking to address contemporary challenges around land management, desertification, water scarcity and reproductive justice. Many proposals focused on the possibilities of research-based tourism, environmental pedagogies and new types of botanical economies, for the constitution of alternatives to the lack of local jobs outside of extractive industries.

Overall, we were able to confirm previous findings on the impacts of extraction. Through multi-year remote-sensing analysis we noted that the extraction of water for lithium and copper mining has impacted the lagoons and water table in the *Salar de Atacama*, how the depth of the water table has been steadily decreasing and how vegetation cover has decreased across the edges of the *Salar*. We encountered cases where animal and microbial ecosystems have been affected by the reduction in water levels, by shifts in the flow of water and by changes in the water's chemical composition; we observed how dust and particulate materials released by mining activities generate a white haze that is permanently over the *Salar*. We confirmed how water is extracted not just in the *Salar*, but also upstream, near the small oases that surround it – precarious settlements that are very much dependent on the little water that trickles down from the top of the mountains. We confirmed that comparatively, *Atacameño* communities circumscribing the *Salar de Atacama* hold an amount of water rights barely sufficient for their survival.



Abemarle lithium extraction infrastructures in Salar de Atacama. Yussel Agbo-Ola, 2018.



Lithium Triangle Evaporation Gradient

Legend  
Salar  
Evaporation Gradient

The project is rather about relationships about establishing an alternative distributed order, a fragmented system of undertakings that: 1- connects communities working in various fields of people into one organism. 2- is a community based on what is the most magnificent natural asset of the land: raw materials, energy solar and what has both magical and practical life-meaning: water. 3- Farm villages are created that integrate various activities and first common aspirations and interests while being environmentally friendly. An organism that binds forces of nature (sun, water, vegetation).



A conversation with Pedro Uc Be  
Facilitated by Antonia Alampi

# Defending the Territory

Pedro Uc Be is a Maya poet, a translator, an organizer, a mobilizer, living in the community of Butcoztz, some 90 km northeast of Mérida, the main city of the region of Yucatán. This region is located on the peninsula that separates the Gulf of Mexico and the Caribbean Sea, and is one of the thirty-two states of the Estados Unidos Mexicanos. The biodiversity of Yucatán is extremely varied and rich, and has a unique ecosystem encompassing very different types of forests (mangroves, tropical, subtropical, seasonal evergreen, savannahs, and more). The conservation of this ecosystem is also due to the protection of Maya People on the territory and their very complex and holistic land management practices and knowledges around care for the Earth, something that enabled them to co-inhabit the natural world for thousands of years, without destroying it and while going through extreme changes and natural disasters.<sup>1</sup>

I met Pedro in early 2021, when he introduced me to the work of The Assembly for the Defence of the Mayan Territory and it is their work this conversation focuses on. Particularly, their starting points and motivations, their strategies and methodologies. The hope is that such a story and the experiences it speaks of may be inspirational for similar but different situations, for collective and local-community driven forms of fighting extraction, land expropriation or ecological devastation.

It is especially a way of reading, or of listening, to the words of people who have been living sustainably for centuries and thanks to whom the majority of the remaining world's biodiversity is protected.<sup>2</sup> Communities who keep on finding ways to defend their territories and all lives on them despite colonization, marginalization, expropriation, the effects of industrial agriculture or of mega projects for mass tourism. A short conversation that may get the reader a tiny bit closer to understanding how to eventually come together for what is a situation we are fundamentally co-dependent in and so responsible for.

**Antonia Alampi** Can you briefly describe the Assembly for the Defence of the Mayan Territory? What does it do and where does the need for its work come from?

**Pedro Uc Be** On January 13th, 2018, those of us who are Mayan peasants, local property owners, collectives, children, women and men, affected in our territory by development megaprojects that occupy large tracts of land for the monoculture of soy, for the construction of pig farms and wind and photovoltaic parks, large hotels, restaurants and their subdivisions, and finally the ill-named Mayan train, gathered together in the city of Mérida. After listening to each other and sharing our words among the people from twenty-five Mayan communities of the Yucatan Peninsula, we agreed to organise ourselves into an assembly in defence of the Mayan territory under the name of Múuch' X'inibal (we walk together).

A Follow-up Commission (FC) was appointed to implement the agreements made. The work of this commission revolves around at least five strategies: media or outreach, the legal strategy, alliances with other organisations, political and organisational community training. The Assembly meets at least once a year, but the Follow-up Commission is in constant contact with the participating communities with which it works. As communities directly affected by the interests of economic and political power, we saw the need to vindicate with all our efforts the values of our Mayan identity with the message "The land is neither for sale nor for rent".

As of today, after our first years of going on this journey together, we have discovered that our path of resistance and organization is the right one. We have been building this together, it is a task or "fa'ina" as we say in these areas: some of us from the CS are in charge of collecting, filtering, editing, synthesizing and translating the information in the national and local media into the Mayan language, that is already cleansed of the power of propaganda, in order to bring it to the communities in need. So, we generate the reflection of the communities that receive it, and begin to make agreements. We produce texts, infographics, videos, audios and even a podcast every Monday in Mayan and Spanish that we call "No-Radio Múuch' X'inibal", as material for informative work, reflection and training in the communities. We implement a community political training program with young people from communities in a fight to conserve their lands and territories, once a month we meet to develop themes around identity, rights, milpa, rites, etc. to vindicate and strengthen our link to our territory. We seek support and legal accompaniment for the communities that wish to bring their land defense cases before the corresponding justice instances such as the Unitary Agrarian Court, the Federal Judiciary or the Prosecutor's Office if necessary. For dissemination we implement a strategy in social media through the publication of information that we produce from the

communities as their defense processes, their demands, their pronouncements, their press conferences, their infographics etc. Finally, we take Mayan literature to the communities, such as poetry and stories or narratives to strengthen the language, culture and identity.

**AA** Thank you so much Pedro, your work is amazing. That's why I want to focus on delving deeper into the practices to realise so many layers and strands of work. In fact, I'm sure that your strategies are incredibly inspiring for many. First of all, how did you manage to gather so many people in 2018? I mean this literally, how did you bring people together from so many distant communities? A Facebook call? Someone wrote a poster? WhatsApp messages that went viral?

**PU** At the beginning of 1986 I worked as coordinator for a non-formal theological training project that included study centres throughout the Yucatan Peninsula, as well as in the state of Chiapas. This role allowed me to visit for the first time most of the Mayan communities and work with them from the perspective of Latin American theology. It also allowed me to meet many people and get to know many Mayan peasants who work their land with joy, with Mayan identity and great strength. In the next Peninsular tour that I went on, to which I was also accompanied by comrade Russell Pebá Ocampo, I held workshops in many communities and ejidos, with the intention to discuss the constitutional reform of article 27 within these spaces, which from our point of view was the legal framework for the beginning of the dispossession of the Mayan peasants and the whole country's land. We also used Convention 169 of the International Labour Organisation (ILO) recently ratified by the Mexican government. It was in this context that we participated in the 50 Years of Indigenous, Black and Popular Resistance Campaign to denounce the celebration that was being prepared by the invading and colonialist countries in 1992. Two years later, the Zapatista Army of National Liberation (EZLN) made its public appearance to vindicate the rights of the indigenous peoples of the country and we joined their demands as Mayan people. Since that experience, we have never stopped visiting the communities to listen to them, talk with them, read with them, celebrate with them and cry with them. Some civil society organizations occasionally invited us to facilitate workshops on human rights and particularly on indigenous rights, and we visited the communities again. All of this to say that our contact with the Mayan territory has been consistent since the end of the 1980s. We founded a movement in the Yucatán Peninsula that we call Indian theology, which originated in San Cristóbal de las Casas, Chiapas, and for over 20 years, this space has served to strengthen the identity of our communities in the southeast of the country. But the experience gained visibility with the arrival of the internet and social media networks, among so many conversations with communities. There was one conversation in particular in which we told how

we were supporting some communities in Quintana Roo to defend their lands from the monoculture of transgenic soy promoted by Monsanto. Then, the host did a live broadcast on one of the social networks, and that's how we received many requests from communities who wanted information about the defence of land and territory because they were being dispossessed by megaprojects such as renewable energy parks, pig farms and real estate among others. It was then when we launched an invitation to meet in the city of Mérida, because many communities had already known us for many years; they responded to our call, and that's when they gave birth to the child that today we know as the Assembly of Defenders of the Maya Territory Múuch' X'inibal.

**AA** From this point on, how do you make collective decisions? Or are decisions made collectively? Or do they always have to be totally collective? How many people or communities are there that make decisions? You talked about the Follow-up Commission, how was it formed and how many people are involved?

**PU** The FC was appointed by the founding Assembly, it meets once a week via zoom to share its activities, to discuss issues and to agree on new activities. It is formed by at least ten people from different communities of the Peninsula. In case anything urgent comes up for a community or a difficult decision must be made, we speak over the phone and through WhatsApp groups, where discussions are held and agreements are reached.

**AA** How do they facilitate collective participation between different people? Are there methodologies to facilitate dialogue and exchange?

**PU** One of the characteristics of Mayan culture is its communitarian nature, it is an "us" culture, not an individualistic one – although colonisation has permeated many spaces with its individualism. However, the Múuch' X'inibal Assembly claims communitarianism, which is composed not only of people but also of animals, birds, water, land, wind, etc. That is why it is of utmost importance for us as a movement that be communitarian: where elders have to attend because of their experience and knowledge to give advice, young people to give strength and dreams, children to learn to walk our paths – everyone in a communal nature without discrimination for disability or gender. Everyone is simply assumed as equal because they are all part of the community, just as the wind or the birds. The strategy, which I'm not sure if it can be a methodology, is to take the information we gather about the community's interests and share it so that they can discuss it with each other or with us; we also read Mayan poetry or stories – which the West calls tales – but which for us are our stories, those of our ancestors; sometimes we read the laws established by the State and compare the criteria of justice of the West with what we as Mayan people understand and assume as justice.

**AA** Time and possibilities: Is it all based on voluntary work in the Follow-up Commission? Do some organisations support you? Do members make small donations? Maybe not even money, but in different ways?

**PU** We are all volunteers. We are not accompanying the communities – we are the communities directly affected by the projects that are dispossessing our territory. Some organisations have supported us with didactic material, or computer equipment that is fundamental in the production and promotion of our work. What is fundamental though, is time, commitment, skill, knowledge and also the different means that each member of the FC has to use in order to work with our communities, such as a bicycle, a motorbike, a car, a mobile phone, internet connection etc. each person contributes that from their own means, as well as space to sleep or eat.

**AA** What are the most complex problems of collective and communal work? Is there any advice?

**PU** The government's counterinsurgency strategy and the development and land grabbing companies are the most difficult problems. The government launches assistance programmes in the communities in order to break communitarianism: buys wills, corrupts community leaders with money, disintegrates families, uses the school to disorient, uses the churches – mainly the modern denominations that speak of the theology of prosperity or the gospel of neo-Pentecostalism – bombards with propaganda, applies programmes of co-optation and destruction of identity, sowing individualism, and as if that were not enough, the political parties end up breaking any attempt at communitarianism.

**AA** If you had to name one or more supporters that you could really benefit from, outside your own group, what or who would they be?

**PU** It would be very helpful for us if they would know us, if they would understand how we organize ourselves to lead our resistance, if they listen to us, and then, if we could talk about what we can share with all those who share our corn heart. We believe in exchange, in sharing our words, our corn, our vision, our dreams; we want to give, we want there to be a big table in a big house where everyone is present just as if it were an altar, where all the colours of maize are presented like a well-made cornfield. We believe that the first thing is to create a community so that our "jicaras" taste like pozole with honey from our native bee sisters.

<sup>1</sup> For more information see Rodrigo Líneas Salazar, YUCATÁN: A VULNERABLE ECOSYSTEM, Caught between Hopes and Threats, published for Spore Initiative's contributions section: <https://spore-initiative.org/di/program/in-berlin/materialien/yucatan-a-vulnerable-ecosystem>

<sup>2</sup> For more data go to: <https://www.worldbank.org/en/topic/indigenouseoples>.



Photography: Haisel de la Cruz

Marina Otero Verzier

# What

Energy dreams are too often realised at the expense of the lives of indigenous peoples, local communities, and their ecosystems.<sup>1</sup> Under the pretext of progress, these groups are portrayed as backward or even non-existent, their bodies and territories equated to resources to be extracted, sacrificed to the logics of profit and 'development'. Post-fossil fuel green futures are no exception. They still depend on extractivist industries that open wounds in mountains and communities, on their ground and the depths beneath them, breaking everything that exists down into pieces for its exploitation to keep the promise of infinite growth alive. All this 'development' is at the detriment of communities who carry the burden for us all.<sup>2</sup>

Covas do Barroso is one of the areas affected by our compulsive desires for more energy and, in particular, more batteries. Located in a mountainous region in the north of Portugal, a site of biodiversity and unique centuries-long cultural traditions, the community of Covas has been rendered a sacrificial area. Its lands contain lithium. Since 2016, the Portuguese and Spanish governments and the European Commission have instigated extraction projects in this region now advertised as one of the largest lithium reserves in Europe. These efforts have been further intensified and vindicated ideologically by the EU Green Deal in 2020 and the geopolitical instability and energy shortages of 2022.

In the name of a green economy and energy independence, the EU presents lithium extraction as a necessary step towards this transition and falsely promotes it as an employment generator. Multinationals operating in the region, such as Savannah Resources, are not only interested in what mountains hold. The possibility of lithium extraction and the prospecting and mining rights are, in themselves, a commodity, a future that companies buy and sell, making a profit out of the eventual mining and the consequent destruction of an ecosystem.

Despite operating under the "clean energy" label, lithium mines have a long-term impact on the quality of air, water, and soil, as well as the lives of beings depending on them, far beyond the pit. The prospect of the environmental and social degradation of places like Covas do Barroso is presented as the lesser evil compared to the dependence on the fossil fuel industry. Since 2018, its inhabitants – supported by a wide range of societal actors and communities affected by lithium extraction in Argentina, Bolivia, Chile, Serbia, and Spain – have sustained direct and legal opposition against projects such as the Mina do Barroso, an open pit mega-mine that threatens the agricultural world heritage. As a result of protests across and beyond Portugal, the state reduced the number of prospective mining sites to 6.<sup>3</sup> Covas de Barroso is among them, still threatened by Western and, particularly, European lithium-powered green futures.

Aida Gomes and Nelson Gomes, representatives from "Unidos em Defesa de Covas do Barroso," an environmental conservation organization created in defense of the communities' interests, are suffering the effects of these futures.<sup>4</sup> If not in Covas do Barroso, where? Some ask them, accepting destruction as the inevitable cost of progress. The real question, however, is whether we are ready to resist our compulsive desires and live appropriately on Earth. The so-called green transition is in vain if not made alongside a reconsideration of the ethics of a society founded on extractivism and consumerism. Even when faced with the climate catastrophe, we tend to render the need for more energy inevitable and rely on finding new fixes rather than embracing other forms of living.

In this context, imagining new energy cultures is paramount for embracing a different way of being in the world. As philosopher Michael Marder contends, we conceive energy as something that the Earth holds or that our bodies and batteries store, which could eventually be released and put to work.<sup>5</sup> This problematic conception of energy assumes the destruction of bodies and ecosystems while searching for and extracting energy.<sup>6</sup> We gamble on, and auction, the future while carrying out actions that foreclose the possibility of a future.

## Mountains' riches

Covas do Barroso is part of a larger area endangered by lithium extraction. Trás-os-Montes e Alto Douro, located in the north-eastern corner of Portugal and the South of Galicia in Spain, has long been known for the riches that mountains hold. Here, ores are often forcibly taken from the entrails of the mountain. Sometimes they burst unexpectedly to the surface. The territory has the most significant quantity of thermal springs in the Iberian Peninsula, whose curative waters contain the same endogenous resources that mining corporations dig for.

Paradoxically, while the EU encourages mining on the territory, and consequently the depletion of the water table, it also promotes the region as a water-based health and wellbeing destination and positions water, and thermalism as strategic resources capable of dynamizing the regions' economy.<sup>7</sup> The proliferation of mining projects puts the quality and quantity of these local springs and their natural mineral waters at risk, making it necessary to decide on which future these communities and ecosystems deserve. "No a Mina, Si a la Vida!" (Não às Minas, Sim à Vida) read the posters, graffiti, and banners populating every corner of Barroso, words also pronounced by the inhabitants as they walk the streets and pass in front of the Savannah Resources headquarters.

The abundance of ores and mineral-medical springs in this cross-border region have been known since Roman times. Yet, it was only in the mid-nineteenth

and the beginning of the twentieth century that it became a health destination. Hot springs were formalized in fountains, and those into sophisticated spa architectures in Verin, Vidago, and Pedras Salgadas. Tourism, social life and health converged, turning the region into a reference for European thermalism. For example, the waters from Fonte Campilho were celebrated since 1882 for their curative properties. But in 1895, when the fountain was transformed into Palacete Templo das Águas, it started to be commercially explored as Gasocarbonic Mineral Water.<sup>8</sup> A mineral and spring water bottling industry, the Fonte Campilho factory, was soon built nearby. From drinking them directly from the rocks to then tasting and bathing in them through elaborated rituals, and finally consuming them through bottled and commercialized versions (such as Campilho, Pedras Salgadas and Cabreiroa), these waters have been carriers of well-being aspirations for centuries.

The resorts erected in Trás-os-Montes e Alto Douro around lithium-rich springs aligns with that of other regions in Europe at the time, which offered bathing and drinking cures to an exhausted society during the era of rapid industrialization.<sup>9</sup> With the advancement of medical sciences in the twentieth century, however, the curative water industries declined, and many of these infrastructures were abandoned. The twenty-first century's obsession with well-being and self-optimization has nevertheless revived these enclaves' thermal experiences. Today, exhaustion and depression – the maladies of neoliberalism – are treated in a system of springs, rivers and thermal baths that share grounds with prospective lithium extraction sites across Europe.<sup>10</sup> These mining, bathing, and drinking territories shed light on lithium's role as a critical component of energy and wellbeing projects. The search and intake of lithium for batteries and mineralized waters follows the capitalist compulsion to put bodies and mountains to operate within the mantra of efficiency and productivity.

## Assemblies

The Termas de Bande, on the banks of the Limia River in Ourense (Spain), is one of the exceptions where the emergence of curative mineralized waters has yet to be exploited commercially. Long before nineteenth-century developments, the Romans had praised these waters as vital for therapeutic and recreational. Between 69 – 79 AD, they erected The Aquis Querquennis camp, which includes a system of open-air thermal baths operating between 36 – 48 degrees Celsius.<sup>11</sup> In 1948, the site fell to the power-hungry infrastructure developments that converge the electrical and political power in Francoist Spain. The Aquis Querquennis was drowned to build the As Conchas dam, partially constructed with the revenues of wolframite mining and its exports to Nazi Germany.<sup>12</sup>

As Conchas radically altered life in the area and came to symbolize the fight between energy projects and socio-cultural and environmental conservation.<sup>13</sup> Almost forty years after its inauguration, in 1985, the Bande City Council and the Hydrographic Confederation started recovering vestiges of both the Roman and a subsequent nineteenth-century bathing infrastructure. Today, people continue to undress and bathe together at As Conchas, floating back and forth between the hot lithium-rich waters coming from the mountain and the cold waters from the reservoir that partially submerge the baths during the summer months.

These embodied experiences allow one to comprehend the intricate energy processes that connect us to others and the planet. As extractivism breaks grounds and communities apart, exhausting lands and bodies to the point of mental and environmental collapse, it becomes increasingly important to practice collective care. Submerged in the hot springs in what Cheila Rodrigues came to define as a "Bathassembléy," bodies honour what has become a rallying cry in the region: "El agua no se vende se cuida y se defiende" (Water is not for sale, it is cared for and defended).

<sup>1</sup> See Michael Marder, *Energy Dreams: Of Actuality* (New York, NY: Columbia University Press, 2017).

<sup>2</sup> My research on the ongoing lithium extraction plans in the North of Portugal has been supported by the Galeria Municipal do Porto, directed by Filipa Ramos. The research conducted in North of Portugal was developed together with Godofredo Pereira and Susana Caló. This essay is a version of a text previously published in The GMP's publication associated to the Colectivos Pláka seminar "Compulsive Desires: On Lithium Extraction, Endless Growth and Self-Optimization", and textual materials presented in the exhibition "Compulsive Desires: On Lithium Extraction and Rebellious Mountains" (25 March – 26 May, 2023) for which I was the curator. This works builds up on the book *Lithium: States of Exhaustion* (ARQ and INDI), co-edited with Anastasia Kubrak and Francisco Diaz.

<sup>3</sup> Andrea Cruz, "Study rules out lithium mining in two areas in northern Portugal, accepts six," *euractiv.com*, 3 February, 2022: [https://www.euractiv.com/section/policies/short\\_news/study-rules-out-lithium-mining-in-two-areas-in-northern-portugal-accepts-six/](https://www.euractiv.com/section/policies/short_news/study-rules-out-lithium-mining-in-two-areas-in-northern-portugal-accepts-six/)

<sup>4</sup> Petition by the Associação Unidos em Defesa de Covas do Barroso for the preservation of the environment, heritage and the health and quality of life in Covas do Barroso, addressed to the President of the Assembly of the Republic, Dr. Eduardo Ferro Rodrigues, Minister of Environment, Dr. João Pedro Matos Fernandes, and Minister of Economy, Dr. Pedro Siza Vieira. <https://peticaopublica.com/peticao.aspx?pi=PT91264>

<sup>5</sup> See Michael Marder, *Energy Dreams: Of Actuality*.

<sup>6</sup> Michael Marder also presented these arguments during the seminar *Compulsive Desires* (Porto, 7 – 11 May, 2022), as well as in the text he authored and included in the present publication. [https://plaka.porto.pt/ficheiros/galeria/docs\\_99\\_3\\_7.pdf](https://plaka.porto.pt/ficheiros/galeria/docs_99_3_7.pdf)

<sup>7</sup> "Operational Program of Cross-border Cooperation Spain-Portugal 2007 – 2013," European Commission website: [https://ec.europa.eu/regional\\_policy/en/atlas/programmes/2007\\_2013/crossborder/operational-programme-spain-portugal](https://ec.europa.eu/regional_policy/en/atlas/programmes/2007_2013/crossborder/operational-programme-spain-portugal). See also "Euregions, Excellence and Innovation across EU borders: A Catalogue of Good Practices," European Commission website: [https://ec.europa.eu/territurum/en/system/files/ged/reccot\\_cri\\_catalogue\\_0.pdf](https://ec.europa.eu/territurum/en/system/files/ged/reccot_cri_catalogue_0.pdf)

<sup>8</sup> Adalberto Teixeira, "Água Mineral-Medicinal De Vidago Fonte Campilho," Inaugural Dissertation, Escola Médico-Cirurgica Do Porto, 1908: [https://repositorio-aberto.up.pt/bitstream/10216/16293/3/137\\_7](https://repositorio-aberto.up.pt/bitstream/10216/16293/3/137_7). EMC, 1, 01, P.pdf

<sup>9</sup> See Anson Rabinbach, *The Human Motor: Energy, Fatigue, and the Origins of Modernity* (Berkeley, Los Angeles, University of California Press, 1992). Rabinbach's seminal book reflects on the body as rendered as a "thermodynamic machine capable of conserving and deploying energy." See also Anastasia Kubrak's contribution to the seminar *Compulsive Desires* (Porto, 7 – 11 May, 2022) and her essay in the associated publication.

<sup>10</sup> Philosopher Byung-Chul Han describes as a turn to "psychopolitics" under neoliberalism. In search of self-optimization and in the name of efficiency, the neoliberal subject finally surrenders to self-exploitation: a compulsion that leads to exhaustion, burnout, and depression.

<sup>11</sup> Aquis Querquennis: <http://www.aquisquerquennis.es/en/roman-fort/>

<sup>12</sup> Embalse de As Conchas, Ministerio de Agricultura, Pesca y Alimentación, Gobierno de España: [https://www.mapa.gob.es/es/desarrollo-rural/temas/caminos-naturales/caminos-naturales/detalle\\_punto\\_interes.aspx?tema=tema30548874&id\\_caminos=O13901&topologia=Hidrografia%3AAD&origen=Destacados](https://www.mapa.gob.es/es/desarrollo-rural/temas/caminos-naturales/caminos-naturales/detalle_punto_interes.aspx?tema=tema30548874&id_caminos=O13901&topologia=Hidrografia%3AAD&origen=Destacados). See Carmona Bada, Xoán, *La Sociedad General Gallega de Electricidad y la formación del sistema eléctrico gallego* (1900 – 1995), Barcelona, 2016.

<sup>13</sup> See also Hilda Carvalho, "Dinero nazi financió al Banco Pastor y a Unión Fenosa," *Diagonal*, 7 December, 2010: <https://www.diagonalperiodico.net/dinero-nazi-financio-al-banco-pastor-y-union-fenosa.html>. Carmona Bada, Xoán, *La Sociedad General Gallega de Electricidad y la formación del sistema eléctrico gallego* (1900 – 1995).

# Mountains Hold

Photography: Marina Otero Verzier



A flock of vicuñas, Jujuy, Argentina in January, 2020.



Enrique Viale and Gastón Chillier

# Towards

The transition from "Nature as an object" to "Nature as a subject" has begun. Establishing Nature as a subject with rights postulates a new way for human beings to relate to Nature and its elements. Therefore, it requires a shift from an anthropocentric paradigm to a socio-biocentric paradigm. The guidelines of this new civilizing paradigm emphasize the abandonment of the characterisation of nature merely as a basket of resources.

On the contrary, it is not considered as an object of domination and purely as an economic resource. However, the universal recognition of the "Rights of Nature" does not presuppose an untouched nature, but rather an integral respect for its existence and the maintenance and regeneration of its life cycles, structure, functions and evolutionary processes, the defense of life systems.

Granting Rights to Nature does not only mean abandoning an idea of conquest, colonization and exploitation of Mother Earth, but also proposes a profound civilizational change that questions all the dominant anthropocentric logics and becomes a vanguard response to the current civilizational crisis. It requires us to think about other life options that involve, to begin with, slowing down the current pattern of consumption, while democratically building more humane and sustainable societies.

The aim is to build a society based on harmonious relationships between human beings and nature, between human beings and living beings, between human beings and themselves, and between human beings and other human beings. This notion, which has been alive in the perceptions of indigenous peoples for a long time, does not imply a millenarian vision of a harmonious paradise, nor a naive idealization that poses a regression to pre-modernity.

It should not seem unusual for humans to seek to secure our existence in the universe through legislation and jurisprudence that begins by favoring our Mother Earth or *Pachamama*, the one who provides our sustenance.

The rights of nature present a challenge to legal science. It is about expanding and completing the paradigm of human rights (anthropocentric view) by including the "rights of nature" (biocentric view). Human Rights are complemented by the Rights of Nature, and vice versa.

Recognising the Rights of Nature implies a transformation of legal thinking. It requires an epistemological shift that revisits and updates the ancestral knowledges and ancestral sciences of the indigenous, rural, afro-latin american and intercultural nations and peoples, complementing them with ecological, technological and multidisciplinary knowledge of the theories of complexity and theories that are critical of predatory development and modernity.

It reorients human beings, communities, societies, peoples and governments to defend, protect, mitigate and restore Mother Earth in a complementary manner, defending life and the beings sheltered and contained in the great home of Mother Earth, re-encouraging and reintegrating with her in a complementary manner and establishing reciprocity with nature and the beings that compose her.

The legal branch of the Rights of Mother Earth states that laws and forms of governance are social constructs that evolve over time and change according to new realities. This legal line proposes the development of an Earth-centred and not only human-centred jurisprudence, and a new legal and institutional framework that includes the premises of scientific, ethical and indigenous currents of thought in order to accelerate the changes we need. The question now, is how can we rethink the legal and institutional order to enable the Earth's wellbeing and the wellbeing of all its elements. How can our legal and policy frameworks reflect that nature has intrinsic values? How can we build a governance that helps avoid catastrophic imbalances on the planet?

Human beings are part of the innumerable collectivity of living beings, they are part of nature, and in this context they are not the centre of Mother Earth or of the cosmos; being part of nature, they must share with other beings, coexisting in a complementary and reciprocal way, contributing to harmony and coexistence. Recognising the Rights of Nature is the outcry of the beings themselves against pollution, degradation, environmental depredation, ecological crisis, social inequality, exploitation, and dispossession of Mother Earth.

Twenty centuries to declare all human beings to be "people", following multiple racism and genocides, helps us to understand the current resistance to declaring that, in addition to us, there are others who also have rights. The history of this issue in the West is a source of skepticism, even if many principles of ecology stem from it. Nevertheless, we can start from the Gaia hypothesis to arrive at the current debates in Latin America, heirs of Aymara, Quechua, Mayan, etc. beliefs, in which, regardless of the name and image that Mother Earth assumes, there is a profound sense of unity of human beings with her, without the pretended distance and superiority that has since been imposed. There is nothing preventing us from taking that step.

# the Rights of Nature

# Manifiesto

## for an Ecosocial Energy Transition from the Peoples of the South

An appeal to leaders, institutions, and our brothers and sisters, from the Ecosocial and Intercultural Pact of the South

More than two years after the outbreak of the COVID-19 pandemic – and now alongside the catastrophic consequences of Russia's invasion of Ukraine – a "new normal" has emerged. This new global status quo reflects a worsening of various crises: social, economic, political, ecological, bio-medical, and geopolitical.

Environmental collapse approaches. Everyday life has become ever more militarized. Access to good food, clean water, and affordable health care has become even more restricted. More governments have turned autocratic. The wealthy have become wealthier, the powerful more powerful, and unregulated technology has only accelerated these trends.

The engines of this unjust status quo – capitalism, patriarchy, colonialism, and various fundamentalisms – are making a bad situation worse. Therefore, we must urgently debate and implement new visions of ecosocial transition and transformation that are gender-just, regenerative, and popular, that are at once local and international.

In this Manifesto for an Ecosocial Energy Transition from the Peoples of the South, we hold that the problems of the Global – geopolitical – South are different from those of the Global North and rising powers such as China. An imbalance of power between these two realms not only persists because of a colonial legacy but has deepened because of a neocolonial energy model. In the context of climate change, ever rising energy needs, and biodiversity loss, the capitalist centers have stepped up the pressure to extract natural wealth and rely on cheap labor from the countries on the periphery. Not only is the well-known extractive paradigm still in place but the North's ecological debt to the South is rising.

What's new about this current moment are the "clean energy transitions" of the North that have put even more pressure on the Global South to yield up cobalt and lithium for the production of high-tech batteries, balsa wood for wind turbines, land for large solar arrays, and new infrastructure for hydrogen megaprojects. This decarbonization of the rich, which is market-based and export-oriented, depends on a new phase of environmental despoliation of the Global South, which affects the lives of millions of women, men, and children, not to mention non-human life. Women, especially from agrarian socie-

ties, are amongst the most impacted. In this way, the Global South has once again become a zone of sacrifice, a basket of purportedly inexhaustible resources for the countries of the North.

A priority for the Global North has been to secure global supply chains, especially of critical raw materials, and prevent certain countries, like China, from monopolizing access. The G7 trade ministers, for instance, recently championed a responsible, sustainable, and transparent supply chain for critical minerals via international cooperation, policy, and finance, including the facilitation of trade in environmental goods and services through the WTO. The Global North has pushed for more trade and investment agreements with the Global South to satisfy its need for resources, particularly those integral to "clean energy transitions." These agreements, designed to reduce barriers to trade and investment, protect and enhance corporate power and rights by subjecting states to potential legal suits according to investor-state dispute settlement (ISDS) mechanisms. The Global North is using these agreements to control the "clean energy transition" and create a new colonialism.

Governments of the South, meanwhile, have fallen into a debt trap, borrowing money to build up industries and large-scale agriculture to supply the North. To repay these debts, governments have felt compelled to extract more resources from the ground, creating a vicious circle of inequality. Today, the imperative to move beyond fossil fuels without any significant reduction in consumption in the North has only increased the pressure to exploit these natural resources. Moreover, as it moves ahead with its own energy transitions, the North has paid only lip service to its responsibility to address its historical and rising ecological debt to the South.

Minor changes in the energy matrix are not enough. The entire energy system must be transformed, from production and distribution to consumption and waste. Substituting electric vehicles for internal-combustion cars is insufficient, for the entire transportation model needs changing, with a reduction of energy consumption and the promotion of sustainable options.

In this way, relations must become more equitable not only between the center and periphery countries but also within countries between the elite and the public. Corrupt elites in the Global South have also collaborated in this unjust system by profiting from extraction, repressing human rights and environmen-

tal defenders, and perpetuating economic inequality.

Rather than solely technological, the solutions to these interlocked crises are above all political.

As activists, intellectuals, and organizations from different countries of the South, we call on change agents from different parts of the world to commit to a radical, democratic, gender-just, regenerative, and popular ecosocial transition that transforms both the energy sector and the industrial and agricultural spheres that depend on large-scale energy inputs. According to the different movements for climate justice, "transition is inevitable, but justice is not."

We still have time to start a just and democratic transition. We can transition away from the neoliberal economic system in a direction that sustains life, combines social justice with environmental justice, brings together egalitarian and democratic values with a resilient, holistic social policy, and restores an ecological balance necessary for a healthy planet. But for that we need more political imagination and more utopian visions of another society that is socially just and respects our planetary common house.

The energy transition should be part of a comprehensive vision that addresses radical inequality in the distribution of energy resources and advances energy democracy. It should de-emphasize large-scale institutions – corporate agriculture, huge energy companies – as well as market-based solutions. Instead, it must strengthen the resilience of civil society and social organizations.

Therefore, we make the following 8 demands:

1) We warn that an energy transition led by corporate megaprojects, coming from the Global North and accepted by numerous governments in the South, entails the enlargement of the zones of sacrifice throughout the Global South, the persistence of the colonial legacy, patriarchy, and the debt trap. Energy is an elemental and inalienable human right, and energy democracy should be our goal.

2) We call on the peoples of the South to reject false solutions that come with new forms of energy colonialism, now in the name of a Green transition. We make an explicit call to continue political coordination among the peoples of the south while also pursuing strategic alliances with critical sectors in the North.

3) To mitigate the havoc of the climate crisis and advance a just and popular ecosocial transition, we demand the payment of the ecological debt. This

means, in the face of the disproportionate Global North responsibility for the climate crisis and ecological collapse, the real implementation of a system of compensation to the global South. This system should include a considerable transfer of funds and appropriate technology, and should consider sovereign debt cancellation for the countries of the South. We support reparations for loss and damage experienced by Indigenous peoples, vulnerable groups and local communities due to mining, big dams, and dirty energy projects.

4) We reject the expansion of the hydrocarbon border in our countries – through fracking and offshore projects – and repudiate the hypocritical discourse of the European Union, which recently declared natural gas and nuclear energy to be "clean energies." As already proposed in the Yasuni Initiative in Ecuador in 2007 and today supported by many social sectors and organizations, we endorse leaving fossil fuels underground and generating the social and labor conditions necessary to abandon extractivism and move toward a post-fossil-fuel future.

5) We similarly reject "green colonialism" in the form of land grabs for solar and wind farms, the indiscriminate mining of critical minerals, and the promotion of technological "fixes" such as blue or grey hydrogen. Enclosure, exclusion, violence, encroachment, and entrenchment have characterized past and current North-South energy relations and are not acceptable in an era of ecosocial transitions.

6) We demand the genuine protection of environment and human rights defenders, particularly indigenous peoples and women at the forefront of resisting extractivism.

7) The elimination of energy poverty in the countries of the South should be among our fundamental objectives – as well as the energy poverty of parts of the Global North – through alternative, decentralized, equitably distributed projects of renewable energy that are owned and operated by communities themselves.

8) We denounce international trade agreements that penalize countries that want to curb fossil fuel extraction. We must stop the use of trade and investment agreements controlled by multinational corporations that ultimately promote more extraction and reinforce a new colonialism.

Our ecosocial alternative is based on countless struggles, strategies, proposals, and community-based initiatives. Our Manifesto connects with the lived experience and critical perspectives of Indigenous peoples and other local communities, women, and youth throughout the Global South. It is inspired by the work done on the rights of nature, buen vivir, vivir sabroso, sumac kawsay, ubuntu, swaraj, the commons, the care economy, agroecology, food sovereignty, post-extractivism, the pluriverse, autonomy, and energy sovereignty. Above all, we call for a radical, democratic, popular, gender-just, regenerative, and comprehensive ecosocial transition.

Following the steps of the Ecosocial and Intercultural Pact of the South (<https://pactoecosocialdelsur.com/>), this Manifesto proposes a dynamic platform that invites you to join our shared struggle for transformation by helping to create collective visions and collective solutions.

We invite you to endorse this manifesto with your signature



Group picture during the "Salinas Grandes and Laguna de Guayatayoc – 2023" intercultural and interdisciplinary gathering, Alfaricito, January 2023. Photography by Florencia Montoya



Still courtesy by Taylor Rees

### DECLARATION OF THE SALINAS GRANDES AND LAGUNA DE GUAYATAYOC BASIN AS A SUBJECT OF RIGHTS

Therefore, we, the communities declare:

**1. That the Salinas Grandes and Laguna Guayatayoc have the right to have its existence and the maintenance and regeneration of its life cycles and functions, structure and evolutionary processes fully respected. It also has the right to the preservation of its salt flats and high Andean wetlands, and respect for water cycles, their existence in the quantity and quality necessary to sustain life systems and to live free of contamination. We demand the recognition and respect of these rights by public authorities and corporations. Similarly, exercising the rights of the Salinas Grandes and Laguna Guayatayoc basin requires the recognition, recovery, respect, protection and dialogue of the diversity of feelings, values, knowledge, practices, abilities, transcendences, transformations, sciences, technologies and norms of all cultures that seek to live in harmony with Nature.**

**2. We – the original inhabitants and communities of the territory of the Basin - and its common goods, are its Guardians and protectors of their rights.**

**3. In the exercise of our constitutional rights, ILO Convention 169, the "Escazú" Agreement and concordant laws, we reaffirm territorial self-determination and the total and definitive rejection of all mega-mining, lithium and other mineral projects in the Salinas Grandes and Laguna Guayatayoc Basin as ancestral guardians of the cultural, territorial and natural heritage of the Kolla and Atacama native peoples.**

**4. We reject – for being unconstitutional – the law that calls for constitutional reform in the province of Jujuy and demand the incorporation of the rights of indigenous peoples in any constituent process.**

This declaration was collectively drafted between the 14th and 15th of January, 2023, in the community of San Francisco de Alfaricito, Jujuy, Argentina, during the 2023 Salinas Grandes and Laguna de Guayatayoc Gathering, co-organized by the Aerocene Community and the Indigenous Communities of Salinas Grandes and Laguna de Guayatayoc, with the Action Collective for Ecosocial Justice (Colectivo de Acción por la Justicia Ecosocial), the Mirá Socio-environmental Collective, the Geopolitics and

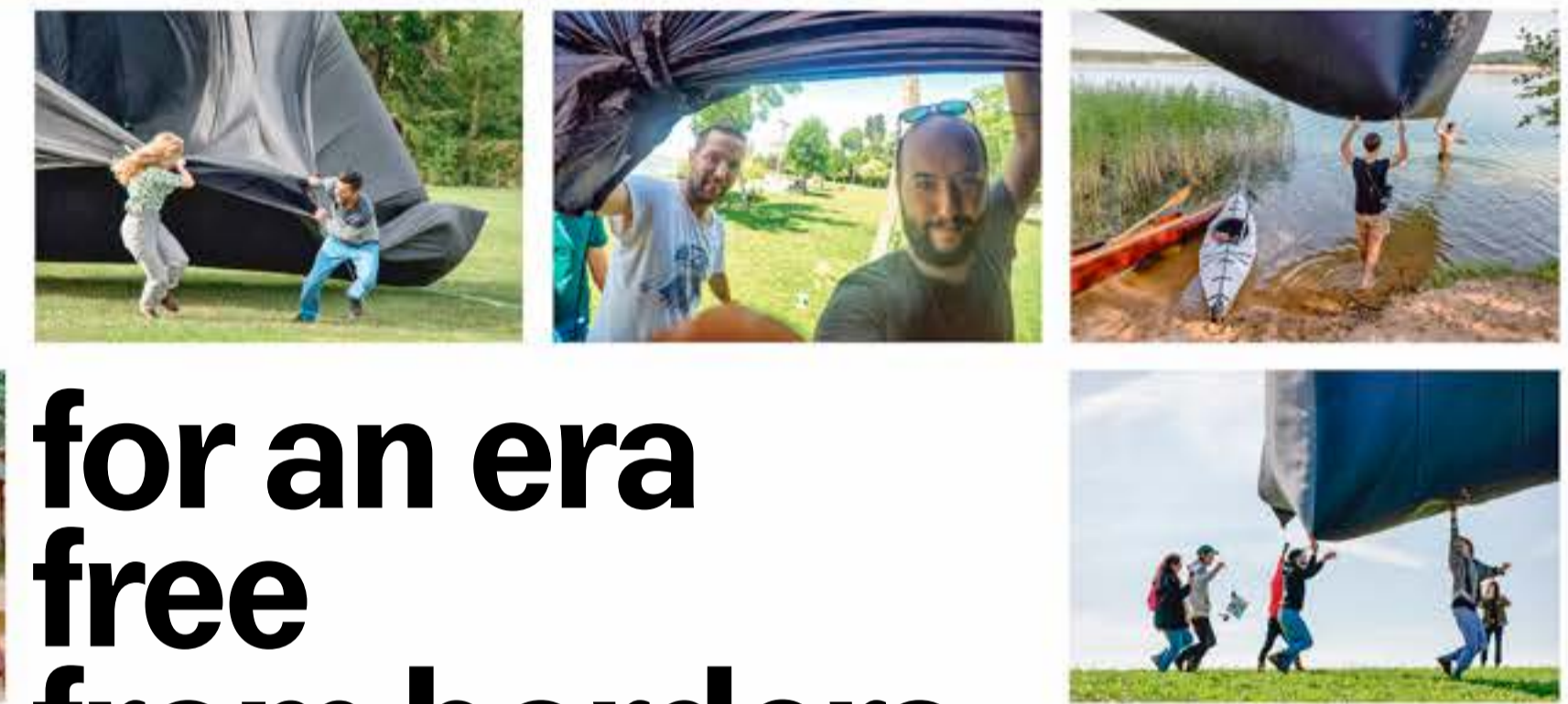
Commons Study Group (Grupo de estudio Geopolítica y Bienes Comunes), the Environment and Natural Resources Foundation (Fundación Ambiente y Recursos Naturales), the Argentine Association of Environmental Lawyers (Asociación Argentina de Abogados/as Ambientalistas), lawyer Alicia Chalabe, writer Graciela Speranza and curator Inés Katzenstein. The text presented here is slightly edited for contextualization.





# Aerocene is a movement

# for an era free from borders and fossil fuels



## Aerocene Community

Aerocene is an interdisciplinary community of diverse artists, activists, geographers, philosophers, speculative scientists, balloonists, technologists, dreamers, and undisciplined thinkers from around the world, coming together for collective performances towards eco-social justice. Our members seek to devise collaborative modes of ecological sensitivity increasing public awareness of global resource circulation, and reactivating a common imaginary towards an ethical collaboration with the environment and the atmosphere. Through a DIT (Do-It-Together) and open-source ethos, we attempt to overcome abusive extractive practices, like oil, gas, and lithium mining among many others, which some humans have imposed on landscapes, ecosystems, communities, and other species. The community's ever-evolving practice manifests in myriad ways, such as the collaboratively development of community toolkits, artistic performances, international gatherings, workshops, educational encounters, and open source consultancies, among many others. It also includes the testing and circulation of aerosol sculptures that become buoyant with nothing but the heat of the sun and infrared radiation from Earth's surface. To build and float with an aerosol sculpture is to engage participants in practices of thinking-through-making and collaborative action, triggering imagination and creativity, and spreading knowledge through a multidisciplinary approach that can extend into other fields of socio-environmental activism.

Over the past six years, the Aerocene community has developed a relationship with the Indigenous Communities of Salinas Grandes and Laguna de Guayatayoc, who have been defending their ancestral rights and the unique ecology of the high-andean wetlands against the advance of industrial lithium mining. These communities assert their right to territorial self-determination and denounce the non-implementation of their right to prior, free, informed and consensual consultation in their territories by filing lawsuits and complaints in the provincial courts, in the Supreme Court of Justice of the Nation as well as in the Inter-American Court of Human Rights.

In addition to legal processes, the Salinas Grandes and Laguna de Guayatayoc communities also work to make visible the urgency of finding alternatives to extractivism in the region. The project Fly with Aerocene Pacha (2020), by the Aerocene community, has to be understood in this context. Aerocene is a call to action for a world where we are no longer dependent on growth and productivity and instead embrace a fluid and reciprocal relation with the living, breathing Earth and its multispecies inhabitants. Named after Pachamama, the Andean concept that connects what lies below and above Earth's surface with the furthest reaches of the cosmos, Fly with Aerocene Pacha

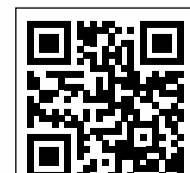
served as a reminder of our interconnectedness as earthly beings, centuries-old systems of knowledge that predate the Capitalocene, and our shared fate with the planet and all who coexist within the terrestrial realm.

Flying Floating completely free from fossil fuels, batteries, lithium, solar panels, helium, and hydrogen, with pilot Leticia Noemi Marques and the message "Water and Life are worth more than Lithium", written with the Communities of Salinas Grandes and Laguna de Guayatayoc, Aerocene Pacha opened a fault line in the graph, in the system's logic, to allow artistic imagination to flow. It made clear that lighter-than-air human flight is possible and raised awareness of multispecies communities threatened in our age of planetary climate crisis.

In January 2023, Aerocene returned to Jujuy's puna along with lawyers, writers, public intellectuals and researchers to continue this ongoing collaboration. The gathering, which took place in the community of San Francisco de Alfarcito, was organized around workshops on the geopolitics of lithium mining, the tactics by governments and international corporations to divide communities, the need for an ecosocial transition and the Rights of Nature. Legal environmental strategies were combined with artistic activations and celebrations. During the encounter, an aerosol sculpture elevated into the air once again, this time with the message: "In complementarity, we take care of the water. Guayatayoc - Salinas Grandes Basin, Argentina", collectively written by members of the local communities. The intercultural and interdisciplinary encounter ended with the drafting of a declaration for the Rights of the Salinas Grandes and Laguna de Guayatayoc basin and the gathering of supporting signatures. The Communities of Salinas Grandes and Laguna de Guayatayoc are not alone in this fight. Their struggles, strategies and successes are part of the global Rights of Nature movement, highlighting, at a time of increasing alienation, the importance of the entanglement of grassroots movements across the world.

If Lithium extraction requires breaking grounds and communities apart, exhausting lands and bodies to the point of mental and environmental collapse, Aerocene aims to bring them together. Together in the fight for climate justice.

This publication celebrates this togetherness.



To learn more about the Aerocene encounters portrayed here, their participants, and to connect with the Aerocene Community follow this QR



## Aerocene

An era-in-the-making, a community, a non-profit foundation, a movement for all

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To learn more about the Aerocene encounters depicted and all who participated, please follow this QR:



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This newspaper is distributed for free. Any donations will go in their entirety to the support of the Communities of Salinas Grandes and Laguna de Guayatayoc.

www.aerocene.org  
#freetheair #flyfreefromfossilfuels  
#waterandlifeareworthmorethanlithium  
#aerocene

This second issue of the Aerocene Newspaper is made in dialogue with and is dedicated to the Indigenous Communities of Salinas Grandes and Laguna de Guayatayoc, for their commitment to defend their rights and a just future for all. It emerges as part of ongoing conversations and activations carried out by a committed, diverse and living collective, and from gatherings that took place in 2017, 2020 and 2023, to be continued...We are deeply grateful to everyone who made this newspaper possible.

Special thanks:

Firstly, to Verónica Chávez, President of the Community Santuario Tres Pozos, for her incredible activism and community organising that keeps uniting the communities together. So much of this has been made possible due to her! To Maristella Svampa, for her active participation in the Aerocene gatherings of 2020 and 2023, and for enabling many of the alliances that give strength to this movement for ecosocial justice. To Inés Katzenstein and Graciela Speranza, who have woven links between many threads and Aerocene and have also shared their heart and powerful words for this collective project. To Melisa Argento, for her endless knowledge and guidance on the complexities of lithium extraction in Argentina and the region. As well as to Alicia Chalabe, Pia Marchegiani and the Fundación Ambiente y Recursos Naturales (FARN), for their ongoing legal and political efforts in defence of the Communities of Salinas Grandes and Laguna de Guayatayoc and for articulating avenues of support for the Aerocene community.

For their inspiring and thought-provoking contributions to this publication we thank those mentioned above, as well as the Communities of Salinas Grandes and Laguna de Guayatayoc, Claudia Aboaf, Antonia Alampí, Gabriela Cabezón Cámara, María Laura Castillo Díaz, Gastón Chillier, Marina Otero Verzier, Godofredo Pereira, Janine Randerson, Pedro Uc Be, Enrique Viale, and the collective Pacto Ecosocial e Intercultural del Sur.

To Joaquín Ezcurra and Maximiliano Laina, who have given their time and expertise to the Aerocene community and are shaping this era through their heartfelt commitment, as well as to Manuela Mazure Azcona, Mai Lumi Azcona, Laura Lumi Azcona and the whole Mazure-Azcona family for their amazing work in the coordination of these gatherings, thank you!

First Aerocene gathering – 2017

For the Tata Inti project, which took place in Salinas Grandes in 2017, thank you to the Communities of Salinas Grandes and Laguna de Guayatayoc, Abel Mamani, Agustina de Ganay, Alfio Demestre, Alicia de Arteaga, Ana Lia Laura Palavecino, Daniela Gutierrez, Eduardo Marengo, Erica Bohm, Froilán Colque, Gabriela Urriaga, Guadalupe Pardo, Guido Ignatti, Guido Poloni, Hernán Soriano, Inés Leyba, Joaquín Ezcurra, Laura Daldin, Laura Nieves, Magdalena Molinari, Mariano Giraud, Martin Bonadeo, Mateo Amaral, Mauricio Corbalan, Mauricio Florentino, Maxi Bellman, Maximiliano Laina, Oliverio Duhalde, Pablo La Padula, Patricia Saragueta, Pio Torroja, Sabrina Martínez Zunni, Sofia Petit de Meurville, Santiago Orti, Sven Steudte, Tomás Saraceno, Yisell Sarasua. This project was made possible thanks to the support of Centro Cultural Kirchner / Sistema Federal de Medios y Contenidos Públicos / Argentina.

Second Aerocene gathering – 2020

For Fly with Aerocene Pacha, 2020, we thank project collaborators: DaeHyung Lee, for the great trust deposited on Aerocene. Without him and the BTS band this gathering would not have happened! Thank you to BTS - RM, Jin, Suga, J-Hope, Jimin, V and Jungkook - Sungmin Chung, Jiwon Choi, 김셋별 AHA, SOMI HONG, Kim Dohyung, and 신화정. As well to Veronica Fiorito for her amazing vision and generosity in making possible everything that occurred at CCK and beyond following this project.

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The sculpture for Fly with Aerocene Pacha was made possible with the generous support from Christian Just Linde.

Third Aerocene gathering – 2023... to be continued

We never thought this encounter of so many brilliant and diverse people and communities could be woven together as quickly as it did, to accomplish something none of us could do alone. For their thoughtful and enduring commitment thanks to all participants of the 2023 gathering in Alfarcito, who include many of this publication's writers, as well as Alicia Chalabe, Bruno Forno, Inés Katzenstein, and the Fundación Ambiente y Recursos Naturales, Colectivo de Acción por la Justicia Ecosocial, Colectivo Mirá and the Asociación Argentina de Abogados/as Ambientalistas. Also to Mai Lumi, Laura Lumi, Manuela Mazure Azcona, Lucía Cash Beare, Joaquín Ezcurra, Maximiliano Laina, Alejo di Rísio, Alejandro Ortigueira, Mariana Delgado, Abril Ayala, Lucas Ulecia, Nazarena Vercellone, Florencia Montoya and Sebastián Cazón and all those who helped us bring this story to the world.

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During the 2023 gathering, we screened the first version of Fly with Pacha, titled Pacha. This living and ever-evolving audio-visual project by Aerocene with community members Maximiliano Laina and Tomás Saraceno began in 2017 and, after the pandemic, this was the first opportunity to share it with the Communities in Salinas Grandes and Laguna de Guayatayoc, many of whose testimonies feature in the project. It was crucial to hear their thoughts prior to sharing it, for the first time in an exhibition context, at Serpentine, London during the summer of 2023. Thank you to all those involved in this project for the continued conversation and collective commitment.

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The basin of Salinas Grandes and Laguna de Guayatayoc continues to be under pressure from extractive forces. Please don't forget to sign the petitions and manifestos to make your voices heard. You are invited to be part of this movement for eco-social justice! You are also welcome to leave us your comments and opinions on aerocene.org. If we have missed any participants and supporters please let us know and they will be integrated.

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