AISÉN RESERVE OF LIFE

Testimony of an environmental activist architect trained at the Faculty of Architecture and Urbanism of the University of Chile

*WELCOME TO THE REPUBLIC OF CHILE - XI REGION / AYSEN RESERVE OF LIFE

90 YEARS OF URBAN PLANNING EDUCATION
AT THE UNIVERSITY OF CHILE

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FACULTAD DE ARQUITECTURA Y URBANISMO
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DEPARTAMENTO DE URBANISMO

Legal Representative: Rosa Devés, Rector of the University of Chile
Dean of Faculty of Architecture and Urbanism: Manuel Amaya Díaz
Director of the Departament of Urbanism: Jorge Inzulza
Editorial Coordination of the First Edition: M. Isabel Pavez Reyes

Editorial Design: Diego Vallejos Oberg
Portugal 84. Santiago, Chile
Postal Code 8331051
Telephone: 56-2 678 3081

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Notes from the Editors

The opinions expressed in this book are the sole responsibility of the author and do not necessarily represent the views of the institution that publishes it. The use of *Aisén* in the title and text of the book has been maintained in accordance with the author's position on page 15. Some images were not found in higher quality, but they are presented as a testament to the action described in the text. The photographs belong to P.H.S, unless otherwise indicated. Whenever possible, sources and text styles used in previously published documents have been updated.

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Konstanza A. Valenzuela S.
Alienor Manteau
María Isabel Díaz Carrasco

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PROLOGUE

The early establishment of the Urban Planning course at the undergraduate level at the University of Chile occurred in 1928, thanks to the initiative of the architect Alberto Schade Pohlenz, who had graduated from this university in 1907.

The Government of Chile sends Alberto Schade to Paris between 1911 and moments before the start of World War I in 1914, while he works in the Department of Architecture of the Directorate General of Public Works of the Ministry of Development of Chile (between 1904 and 1918). In the 1920s, Schade is making proposals to establish a rational layout of diagonal avenues for Santiago and, in 1929, he joins a commission with Luis Muñoz Maluschka, Jorge Alessandri Rodríguez, and Francisco Mardones Otaíza to establish the foundations for a first master plan for this city, which already had 700,000 inhabitants and was expected to reach 1 million by 1940.

The most noteworthy aspect of the Urbanism course that Schade himself taught – actually a course on Urbanistics – was that he managed to relate the rigorous disciplines in urbanization matters (city infrastructure) to social sciences. He emphasized to his students the need to approach the regulatory projects of Chilean cities with a complexity that should surpass a purely aesthetic perspective. At a time when significant progress in urban planning had occurred more in Germany than in France, it is not surprising that the course created by Schade also included an admirer of German values and a critic of Haussmannian propositions, the Austrian Camilo Sitte.

It is within the framework of the celebration of the 90th anniversary of the establishment of Urbanism education at the undergraduate level in the 'School of Architecture' – now the Faculty of Architecture and

Urbanism – at the University of Chile that we find it fitting to sponsor the book by architect Peter Hartmann Samhaber. He is a distinguished graduate and internationally recognized change agent, providing an account of his work as a territorial planner, environmental activist, and resident of Aisén since 1984.

In 1982, while an undergraduate intern under the guidance of architect and urban planner Juan Parrochia Beguin (1930-2016), he traveled to Aisén to develop a comprehensive proposal covering micro-regional planning to urban and architectural design for a new settlement. This settlement was intended to play a crucial role in integrating the study area into its region and the country. The challenging conditions of the work, often at -20 °C, required not only applying the knowledge acquired during his studies at our School of Architecture and Urbanism but also leveraging his experience in high-altitude mountainous terrain. His actions demanded survival skills in extreme conditions. Furthermore, it required strength and conviction to express harsh criticisms of many aspects of development management observed on-site. From that moment, he embarked on a professional and personal journey associated with Aisén until the present day, earning various recognitions, including the international distinction of Ashoka: Innovators for The Public (Change Agent).

We are certain that readers will appreciate this publication as much as we have at the Universidad de Chile's Faculty of Architecture and Urbanism and its Department of Urbanism.

November 2018.

Architect Ernesto Calderón Álvarez,

Department of Urbanism Head Director

Faculty of Architecture and Urbanism, University of Chile.

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WORDS OF GRATITUDE

"Never doubt that a small group of thoughtful, committed citizens can change the world."

Margaret Mead

"Many small people, in small places, doing small things can change the world."

Eduardo Galeano

One comes from the family already molded by some cultural influences, in my case, a love for nature and outdoor life, the use of hands, among others. Then there are the influences of the educational system and, in our case, especially the University of Chile with the imprint of the teacher J. Parrochia B. Additionally, there are the responses given to us by Schumacher (1975) and Gandhi in our search. Later, there would be the influence of the Center for Education and Technologies for Latin America (CETAL) with socially appropriate technologies, the permaculture of Murumé-Jan Correa, and environmentalism and ecology embraced by the Committee for the Defense of Fauna and Flora (CODEFF) and the National Network for Ecological Action (RENACE), where notable figures such as Pedro Serrano, Carlos Prosser, Sara Larraín, and Manuel Baquedano played a significant role. We also learned a lot from the masters of the National Forestry Corporation (CONAF), J. Rottmann, C. Weber, and Nelson Vera. Later on, we delved into lichens with Wanda Quilot, peat bogs with Carolina Rodríguez, and cypresses with Kyla Zaret.

We were lucky to have Gastón Oyarzún, Claudio Lucero and the National Outdoor Leadership School (NOLS) as mountaineering teachers. We were introduced to the sea by Carlos Viviani and then Edwin Nitklischek, Juan Carlos Cardenas and Héctor Kol. We learned about the importance of rivers from Juan Pablo Orrego, River Rally's, International Rivers and Ríos Silenciados (McCully, 2004).

The contributions of Manfred Max Neef, Mr. Hernán Contreras Manfredi, and Leonardo Boff were particularly important to the creation of the proposal of "Aisén Life Reserve" (Aisén Reserva de Vida). Later, contributions from AVINA Patagonia's social entrepreneurs were very helpful, starting with our regional

nucleus: Miriam Chible, Patricio Segura, Alejandro del Pino, and Francisco Vio, to which we should add Jessy Añasco, Gianella Saini, Hernán Ríos, Hipólito Medina, Héctor Caballero, Ricardo Orellana, Carmen Blumberg, Vicky Rojas, Augusta Godoy, Cyntia Knowles, Tamara Ullrich, Francisco Croxatto, Fernán Silva, Magdalena Rosas, Luis Moraga, Jorge Díaz G., Carlos Pérez A., Daniela Álvarez, Gedra Espinoza, Francesca Brautigam, Claudia Torres, Verónica Parada, Paula Cruces, Lorena Santibáñez, Mauricio Osorio, Leopoldo Sánchez, Antonio Horvath, Militza Aguirre, Patricio Ramos, Daniela Castro, Bishop L. Infanti, and many others.

The proposal for "Patagonia, World Heritage" originated thanks to Jenia Cofré, then the president of CODEFF and Peaceboat. It moved forward thanks to the support of Ariel Orellana.

The takeoff of our initiative would not have been possible without the support of Ashoka, AVINA Patagonia, Douglas Tompkins and Fondo de las Américas.

It is important to mention the support of D. Tompkins, Natural Resources Defense Council (NRDC), Greenpeace, Mining Watch, International Rivers, Weeden, Tides, Greengrants, Marisla, CASA, Hollomon Price Foundations, and the nearly always volunteer work of hundreds of people and organizations. Without their support, this would not have been possible.

The truth is that every time we were distressed by the overwhelming challenges that faced us, there was always a saving grace. It was not in vain that Gandhi said that "when fighting for fairness, the means arrive on their own". Our efforts almost always had positive outcomes in unexpected moments and ways. "Patagonia defends itself," or, as one might say, "God is on our side."

In our country, Chile, the average person is not taken seriously unless they are famous or influential, forcing people to work with organizations. We've learned that we can generate greater change by coming together and organizing amongst ourselves. In 1982 we partnered with CODEFF and were founders and participants of the National Network for Ecological Action (RENACE), Corporation for the Development of Aysén (CODESA Aysén) and CODEFF's

branch Coyhaique-Aisén. NGOs were very important in those times. The last organization we founded, in 2013, is Aisén Reserva de Vida (ARV), Aisén Reserve of Life, and we also were part of the beautiful experience of the Oscar Romero Committee of Coyhaique.

Lately it has become difficult to organize and work alongside one another. Other organizations have emerged, as well as some degree of institutionalization and globalization, from which we feel some degree of competition and strange maneuvers. We also noticed that in Chile, criticism is taken as aggression, as assault, rather than as an open door to discussion or a warning to go back to the right path.

We think that it is necessary to work together, or to cooperate with people and organizations aligned with one's objectives. At one point, we had a group called 'Aisén Reserve of Life Friends' and then 'Aisén Reserve of Life Defenders'. We formed the Aisén Reserve of Life Citizen Committee in the campaign against Alumysa, and the Citizen Aisén Reserve of Life Coalition in the "Patagonia sin Represas" (Patagonia Without Dams) campaign.

To all those mentioned above, and to the many who remain unnamed, we express our gratitude and hope for a better future for Aisén Reserve of Life.

Figure 1

CODEFF meeting with national leaders in late 90s.

Figure 2

In the Peaceboat, launching Patagonia World Heritage proposal.

Figure 3

The honor of being a "fellow" Ashoka (agent of change).

Figure 4

Aisén Reserve of Life Leaders meeting in Coyhaique.

Figure 5

Aisén Reserve of Life Leaders meeting.

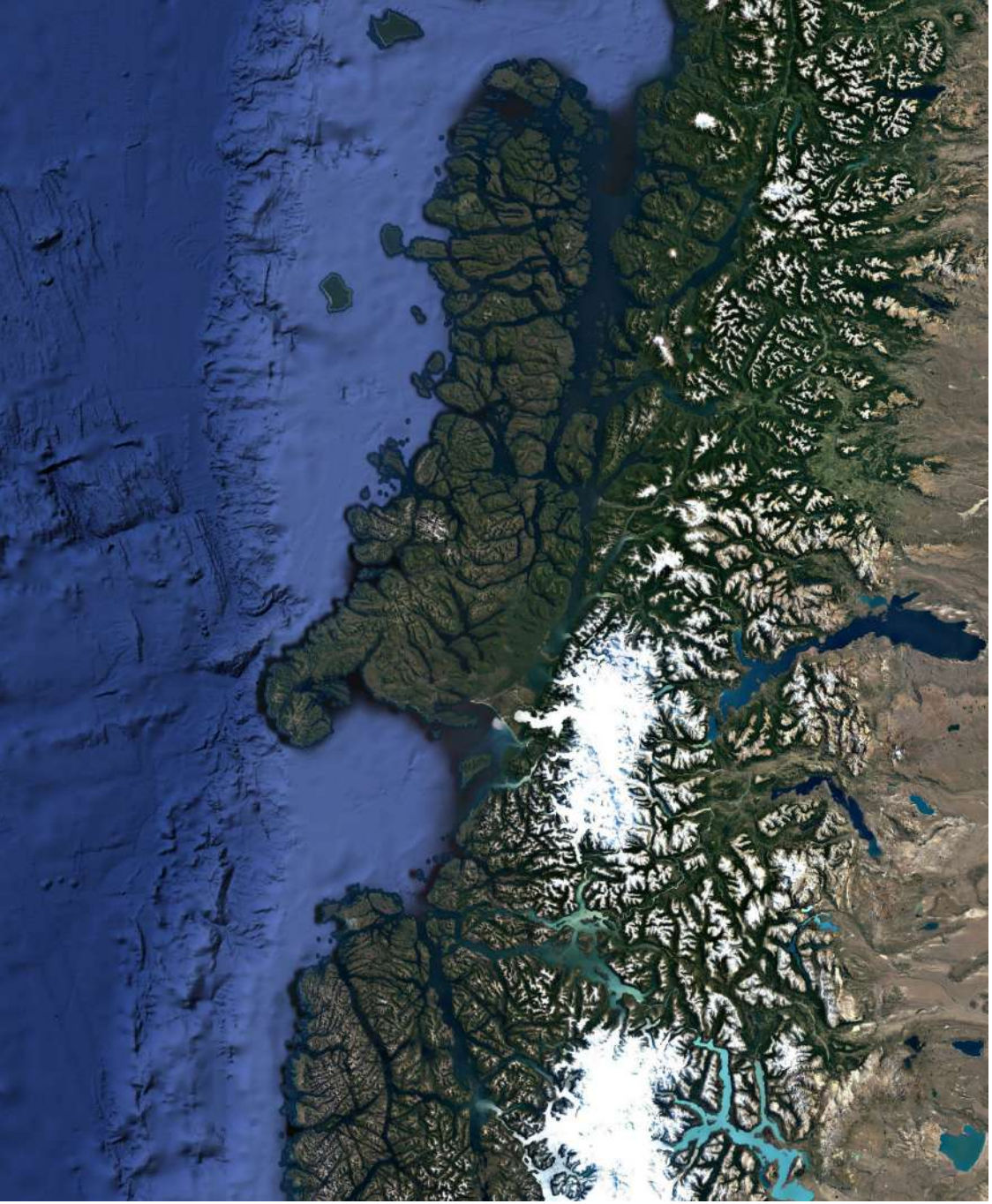

Figure 6

Satellite photograph of Aisén. The ice fields, snowy mountains, estuaries and island chains; and the great lakes stand out. Source GoogleEarth Data SIO, NOAA, U.S. Navy, NGA, GEBCO. Image Landsat/Copernicus.

INTRODUCTION

"Everything that has been achieved in the world... was made possible by ideals and hopes that far exceeded the possibilities of the moment."

Herman Hesse

My objective in writing this book has been to share our work in the Aisén region of Patagonia, where I've lived since 1984. I hope to motivate others to become new pioneers in these far-away Chilean lands, to think and act differently, and to actively serve the nation and the world. So much work remains to be done in land planning and sustainability, regionally and across the planet. I also hope to shed light on this wonderful region where we live.

The creation of this book already dates back to some years ago, when we met with the writer Luis Sepúlveda in Coyhaique, and then, later, with academics from the Universidad de Chile's Urbanism Department in the Faculty of Architecture and Urbanism in Santiago, who were interested in my objectives and with whom I have remained in contact through all these years. Our photographs, which always say more than words can express, illustrate what we describe here as well as everything we do not say.

It is worth mentioning, too, that the idea for Aisén Reserve of Life took shape gradually. It began as a motto. After we were criticized, we made it clear that our motto was based on a concept, a proposal, that we would seek and demonstrate the environmental and cultural values of the region. When some suggested that this was mere theory, we decided to put our slogan into practice through various personal and familial projects. It has taken significant time and effort to defend our decision to be different, especially in the face of major mega-projects that have attempted to establish themselves in the country. Throughout all of these years, we were lucky to work alongside invaluable partners, without whom this collective project would have been impossible.

This is how the grassroots mega-initiative Aisén Reserve of Life came to life in 1990, as a quest for an alternative, sustainable regional

development plan, and as a response to the centralist, destructive, and predatory traditional development model, exemplified at time by Gastre's nuclear dump project in Argentine Patagonia and the "Fishing Boom" in the Aisén sea.

In this account, we will present the history, rationale, and content of the proposal. Through records, photographs, and historical documents, we will describe those who propelled it forward and illustrate the geographic and administrative context. We will also defend our right to live in a Reserva de Vida, or Life Reserve, which we obtained through various epic and successful campaigns.

While the grassroots mega-proposal Aisén Reserva de Vida is a collective effort, there were always protagonists who initiated our ideas and actions with knowledge, experience, and energy. That's how we've been fueling this process since 1990.

But how could anyone come up with something like this? How did we develop this proposal?

From Coya to Coyhaique

I grew up in the town of Coya, surrounded by hills, in a family with passion for the arts and who admired and enjoyed nature. We spent our vacations by the lakes, rivers and forests of the south. My great-uncle, Ernst Samhaber (190-1974)[1]. , was a famous writer. When I was 12, I

[1] Ernst Samhaber (1901-1974): Historian and writer born in Valparaíso and deceased in Hamburg, journalist (specialized in the United States and South America), and economist. He attended the Goethe School; a precursor to the Berlin Goethe-Gymnasium in Wilmersdorf. From 1918 to 1923, he studied philosophy, history, and Semitic languages at the universities of Berlin, Hamburg, and Munich. In 1921, he was in Munich for his Dr. Ing. Phil. PhD. Later, he became an Associate Professor of Ancient History (Assyriology) at the University of Chile. From 1930 to 1931, he worked as a full-time employee and consultant for Chile at the Ibero-American Institute (IAI) in Berlin. He then returned to Chile for a while and worked as an independent writer. He was never a member of the PNS, although he worked for written media under the Nazi regime. After the war, he founded and was the first editor-in-chief of the weekly magazine "Die Zeit" in Hamburg, coming into conflict with the British occupiers who prohibited him from practicing. He was considered a combative conservative and one of the leading German editors of the post-war period. From 1956 to 1961, he was a professor of Ibero-American sociology at the Technical University of Berlin. Author of 21 books.

became a provincial, nomadic student moving between boarding schools and guest houses in San Fernando, Rancagua and Santiago; when I wasn't hitchhiking, I was a frequent passenger on public buses and trains. These experiences helped develop my capacity to adapt to new environments and companions. Eventually, in 1974, I attended the Faculty of Architecture and Urbanism in Universidad de Chile, then located in Cerrillos. I finished my education in 1982 in Marcoleta with an in-depth seminar and internship lead by Professor Juan Parrochia B.

I had previously found some answers in my search for a better country and world. I had the opportunity to work in the studio of the architect Gerhard Laage (1925-2012)[2], other one of my uncles, and a very distinguished professional in Hamburg. I also visited the School of Architecture in Hanover, where I learned from another uncle: Erwin Laage (1920-1997)[3], the Garden Manager of that German city. Apart from the knowledge that I gained, I became a bit disillusioned with the German lifestyle and development model. I had also already been to the United States as an exchange student and seen the reality of the "development" that many people here see as an example. After the doubts and worries we experienced during the Unidad Popular, we reached another negative answer in our search. The military dictatorship in Chile and the installation of a neoliberal economic model, evidently, was an even more negative experience. During this time of questioning, we

[2] Gerhard Laage (1925-2012): German architect and university professor at the University of Hannover; in 1974-1975, he simultaneously served as the Rector of the university. Laage studied from 1948 to 1953 at the Technical University of Braunschweig with Friedrich Wilhelm Kraemer. He then ran an architecture workshop with his father Richard Laage (PPL). From 1963 until his retirement in 1992, Laage was a professor in the Department of History and Theory of Architecture at the University of Hannover. A childhood friendship connected Laage with Helmut Schmidt, whom he advised during his time as Chancellor (1974-1982) on architectural and urban planning issues. From 1960, Gerhard Laage was a member of the board of the Hamburg State Group of the German Architects' Association (BDA) for 13 years, and from 1990 to 1992, he was the President of the Federal Chamber of Architects. In 2008, he was awarded a Dr.-Ing. PhD.

[3] Erwin Laage (1920-1997): Landscape architect (03/May/1896, Munich; 07/April/1976, Hamburg), son of the architect Richard Laage. He studied landscaping at the Higher School in Hannover. As a professional, he worked in the Directorate of Gardens and Cemeteries in the capital of Lower Saxony on several large and innovative projects. As Director of Gardens since 1964, he successfully integrated a green space plan into the urban planning and regulatory plan for Hannover.

encountered the idea of "eco-development", which then became known as "sustainable development", and we observed the green, pacifist Europeans' political proposals with interest. Finally, we found the book "Small is Beautiful" by E. F. Schumacher (1975)—or rather, it found us. That book illuminated our path forward. We also began to be inspired by Gandhi's ethics and love for villagers.

It is important to add to the aforementioned experiences that in 1997, I participated in a summer volunteering job in what was then called Mainland Chile, where the Military Labor Command was building the Carretera Austral. In the summer of 1978, we returned and traveled down the "Carretera" from Puerto Montt to "Río Negro", near Pumalín-Reñihue and south of Yelcho Lake. Those experiences were memorialized in two photography exhibits and in an article in the "Revista del Domingo" (Sunday Magazine). In those years I also spent time mountaineering: I was a part of the first expedition to the "Ruta de los Polacos"— Aconcagua '81, which was awarded Best Activity of the Year by the Federacion de Andinismo.

As an alumni of the architecture track in the Faculty of Architecture and Urbanism in the Universidad de Chile in the late 70s and early 80s, I had the privilege of having a group of distinguished professors of urban design and regional planning: Rene Martínez L., Manuel Fernández H., Holger Jorgensen, Jorge Gómez and, finally, in my last university year, the architect and urbanist Juan Parrochia Beguine, also an alumni of the faculty, who was awarded the National Urbanism Prize in 1996. I also took courses in wood architecture with Heinz Leser and technology courses with Morris Testa in my undergraduate years, which proved useful.

The beauty and remarkable variety of our country's geography, our love for nature, and our experience in other sectors led me to conduct my investigation seminar and internship outside of the Metropolitan Region of Santiago.

With the guidance of Professor Juan Parrochia Beguin (Traiguén, 1930 – Santiago of Chile, 2016), I first completed my Investigation Seminar in Urbanism, working in Cardenal Caro Province (Córdoba et

al., 1981) before beginning my internship in Aisén (Hartman, 1982, y 2003).

So, in 1981, we worked on the seminar in Cardenal J. M. Caro Province, 200 kilometers from Santiago. Back then, we approached the territorial planning process from micro-regional planning to housing. We discovered an impoverished region, where hopes for better days seemed futile. However, after studying the community's issues, we found feasible solutions. We got to know what a "village" is: the most elemental human group, where men and nature are equally important, where men don't settle against nature but rather in coordination with it, and where men rejoice in what they have built. Professor Parrochia had introduced us to his Theory of Planning and Organic Gravitation, patiently helping us understand the complex issue of human settlements in rural areas. His guidelines gradually helped us to clearly see a more promising horizon for the field. His focus was truly academic. We were happy by the end of that unforgettable experience, because conducting academic research was more than just following a method and presenting the results in illustrated writing: it was to work on a project that made us feel useful, and that gave us joy. The lessons and conversations we had with our professor, with his vast experience and knowledge, impacted us deeply. This, too, became the starting point of an academic enterprise of different nature, which would change our lives.

In 1982, we began our internship. After considering different options, we chose the one that was the most interesting for the field as well as for our development as individuals. The area of study we chose was in the XI Region of Chile, Aisén, which meant that we would not only need to apply everything we had learned in the Faculty of Architecture and Urbanism, but also our mountaineering experience, as the working conditions required us to be able to survive in extreme conditions.

Professionally, the work involved realizing a comprehensive proposal, from micro-regional planning to the urban and architectural design of a new settlement, which would play a key role in the integration of our field of study into the region and country.

Caleta Tortel –a settlement of 207 inhabitants at that time, at the

mouth of the Baker River (Capitan Prat Province), with 2.737 inhabitants (Statistics National Institute, 1982) and located 2.150 km south from Santiago– is the capital of the Tortel Commune (with 292 inhabitants and 19.940 km^2, one of the biggest regions of Chile), located at 73 to 76 longitude and 47 to 49 latitude between the North and South Ice Fields of the Aisén Region.

The nucleus of Caleta Tortel, which was supposedly unable to meet any new requirements, had to transfer its functions to a new settlement called Puerto Yungay, which would also function as the southern terminal port of the Carretera Austral. The new settlement of Puerto Yungay, planned by the Regional Secretariat for Planning and Coordination of the Aysén Region (SERPLAC Aysén), the Ministry of Housing and Urbanism (MINVU), and the Ministry of Public Works (MOP), was located in the newly created Commune of Tortel, in southern Aisén.

Once again, we relied on the guidance of Professor Parrochia, who had experience in the field (Parrochia, 1989; Chile- MOP, 1965)[4] . This allowed us to begin our work in the Zona Austral twice as motivated and with distinct guidelines. Our six months of field work were incredibly interesting. We discovered places of superlative beauty, but even our mountaineering experience – including Aconcagua and Ruta los Polacos –was not enough. We were drenched for weeks, with ruined clothes, terrible fatigue, health problems, and barely any food. We spent the coldest week of our lives at -20°C, and once we nearly lost our lives. Still, always in high spirits, I completed the internship experience I had set for myself[5]. Throughout the entire process we applied the Planning and

[4] Juan Parrochia Beguin (1930-2016): Juan Parrochia Beguin had been involved since 1965 in the Development Plan for the "Channels Zone", serving as the head of the Plans Department of Public Works. Under the leadership of Alfonso Díaz Ossa, and alongside a team composed of the directors of Roads, Airports, Ports, and Architecture, as well as numerous dependent professionals, a significant coordinating task had begun for these services. This effort continued the action initiated with great sacrifice since the 1920s in the southern zone, covering the provinces of Llanquihue, Chiloé, Aisén, and Magallanes.

[5] After two visits to Coyhaique – a city located 500 km north of Caleta Tortel – for the purpose of coordinating, among other things, fieldwork with surveyors, with the perspective of a "Plan de Loteo de Puerto Yungay" (a land subdivision plan for Puerto Yungay), nothing came to fruition. The surveyors were reluctant to work in the challenging

Organic Gravitation Theory method developed by our guide, Professor Parrochia.

The final internship report, in two volumes, provided an account of my contributions. We expressed our strong criticism of many aspects of development management we observed on the field. Based on our analysis of what existed of Puerto Yungay upon our arrival, I affirmed that it had not been thoughtfully or responsibly planned. I claimed back then, and reaffirm today, that it is not possible to plan long-term projects based on simplistic assumptions about a place, formed during a mere hours-long visit and lousy or incorrect records.

As for the argument emphasizing the "high costs" of any other possibility, it seemed necessary to me to dwell on this analysis: a tubercular and malnourished population, living in a town on a gloomy swamp without possibilities of expansion and divorced from its original role, is not very promising to begin with. Similarly, the alleged unfeasibility of Caleta Tortel turned out to be false: today, that town has become a place of touristic and architectural attraction on a national and international levels.

At the end of my work, I left one of the most isolated places in Chile. By then, we were in the middle of winter, around -20°C, and there was a lot to do, with big problems to solve. It was an unforgettable experience. In addition to applying our knowledge as an urban architects and photographers, we embarked on many adventures. We're proud of being the first "mainlanders" to descend the Río Baker in a cypress raft, and

geography of the area, certain regional funds for long-term projects were eliminated due to the country's economic recession in those years, and, finally, on the return flight to Caleta Tortel, we were on the verge of losing our lives. We continued without the economic resources, relying on the scarce and inaccurate information we had. Without topography, designing a settlement in such an intricate place, with so many challenges for human habitation like "Puerto Yungay," is almost impossible. However, the slower process of recognizing the area and reflecting on the information we were gathering led us to discover an alternative to "Puerto Yungay," which, although requiring more detailed studies, was feasible, interesting, and undoubtedly better than existing options because it integrated more with the settlement of Caleta Tortel. A relocation from Caleta Tortel to "Puerto Yungay" is not that easy. We thought it was essential, on the other hand, to consult the inhabitants of the area for their opinion, interests, ideas, and customs to successfully thrive in this environment.

to have helped install the first drinking water system in Caleta Tortel. We ended up completely in love with Patagonia. By the end of the year, we graduated with the highest score, in large part thanks to Professor Parrochia (Hartmann, 1982).

Today, nearly thirty years later, I can say that I learned about so much more than architecture from this experience and from Professor Parrochia. I consider him to be one of the many wise men I was lucky to have as mentors in life. From him, I learned that everything is connected –natural law–, as well as about the importance of looking toward the future –planning–. Mr. Juan Parrochia undoubtedly had a great influence on my life.

In 1982 we also became members of CODEFF, after successfully obtaining the declaration of National Reserve Los Cipreses in Cachapoal in a joint operation with CONAF and important figures from Rancagua. Then we prevented the MOP from extracting water from Chungará Lake, in National Park Lauca to send to Arica. In 1985, our appeal to the Supreme Court was successful, partly thanks to our lawyer Fernando Dougnac with the backing of Mr. Godofredo Stutzin.

In 1983 we had the opportunity to visit many European cities, where we focused on studying public spaces. We established our "urban categories," from "made with love", "made with money", and "made with money and love".

In 1984, thanks to our enthusiastic work in Tortel, we were offered two jobs in Coyhaique. In October of the same year, we moved to the capital of the XI Region and work in the Urban Development Department at the Regional Secretariat of the Ministry of Housing and Urbanism (MINVU). During the eight years we worked there, the project for Puerto Yungay, for which we had been hired, was the least of our priorities. Instead, we had the opportunity to design some urban planning instruments, where we could implement innovative ideas, such as the re-planning of Puerto Bertrand, the Cerro Castillo Sectional, the Regulatory Plan of Puerto Cisnes, and as a counterpart in the development of the Regulatory Plans for Coyhaique and the Interurban Area between Puerto Aysén and Puerto Chacabuco.

While we worked at MINVU we never stopped caring about environmental issues. The most famous at that time was the campaign against Gastre's nuclear dump. Since then, we gave "ecological" shows on regional radio stations, which were the main means of local communication. These novel shows were, and still are, an important way to reach the community. We also took a "socially appropriate technologies" course and learned about permaculture with a New Zealander friend, which gave us vital sustenance for the future. In the early 1990s, along with the return of democracy, we left MINVU to return to nature and build our house on the outskirts of Coyhaique. In these years of plethoric change, charged with new energy, the "Aisén Reserve of Life" proposal came to life.

They say that you need to know in order to love, and to love in order to protect. Likewise, it has always seemed unethical to us to opine without knowledge. Though Tortel and the Rio Baker and Pascua had already captivated us, we discovered far more of the area working as the regional Project Manager at MINVU. We went on many mountaineering expeditions and participated in the first ascents of many Patagonian mountains, learning about the land from above, in the best way possible. In 1994 we also worked on the study "Diagnosis and Location of New Population Centers in the Northern Coastal Area of Aysén" (Hartmann, 1995), which helped us learn about the world beyond Aisén's northern shore.

The Topia

Though the Aisén Reserve of Life proposal may seem like a utopia –one of those imaginary places we look up to when reaching for the horizon, and our proposal certainly draws on aspects of this idea – for us it is a topia; it is a place, and that place is the territory of Aisén. If that wasn't the case, what could we, as territorial planners, do about it? This is proof of how much of an impact territorial planners can have. In any case, what we don't ever want is for Aisén to become a dystopia, a "bad place." There are already too many of those in the world.

Finally, before we dive into the bulk of the material, it's important to explain why we write "Aisén" instead of "Aysén." Father José García first

used this name in 1766-1767 (García, 1875/1879). Given that he was traveling with the indigenous Chonos (Caucahues) in their canoes, we can infer that they taught him the word. According to Steffen (1994), a note from Moraleda indicates that the word "Aysén" comes from the native language Veliche and that it means "entering". When it relates to the sea, more specifically, Aysén means "penetrating particularly deeply." Garcia, as well as Moraleda in his nautical charts, wrote Aysén with "y". However, according to linguistic professor L. Falindo (2001), the fact that Spanish orthography replaced "y" with "i" (Valparayso, Reyno, and Buenos Ayres, for example, were changed to to Valparaíso, Reino, and Buenos Aires), indicates that, strictly speaking, Aisén should also be written with "i". Still, so many people continued to use "y" that the spelling "Aysen" became practically official, even though the Military Geography Institute used "Aisén".

On our part, we asked for our doorbell to be made with "y", but it was mistakenly made with "i", and since around that time the mega-project Aluminios de Aysén, owned by Proyectos Aysén, appeared, we decided to keep "Aisén" as a sign of our disagreement with them.

The "Aysén Territory" was recently created by Supreme Decree N° 8582 on December 30th, 1927, 28 years after the beginning of colonization. Previously, during the Republic, it was a part of the Llanquihue, Chiloé and Magallanes provinces. In the time of the Spanish conquest, it was known as "Trapananda" and the "Potrero de los Rabudos," or "Long tailed". Until 1763, what we currently known as Aisén did not appear in any geographic charts. The Región de Aysén del General Carlos Ibáñez del Campo was created in 1974.

The nomadic Tehuelches once lived in the steppes in the interior of the territory, making occasional forays into the wooded mountain valleys. The Chono, canoeing nomads, lived near the coast, north of the Isthmus of Ofqui, and the Kaweskar lived to the south.

Chile's colonization of the territory began in Melinka and Los Leones Island in 1859-1889. Following the expeditions of the Boundary Commission in the early 20th century, the government began granting concessions over entire valleys and river basins to livestock companies. In

those years, the territory was also spontaneously colonized by "settlers" who crossed over from the Argentine Pampa, where they worked on cattle ranches, after the border arbitration.

Aisén currently has a surface area of 108.000 km², 48% of which is government-protected wilderness. According to the 2017 census, Aisén has 102.000 inhabitants, meaning that it has a low geographical density (1,05 inhabitants/km²) and isolation. The ecumenical density, however, is much higher.

When we were children, we learned in school that the Andes Mountains delineate Chile's western boundary. Indeed, the 1881 Treaty with Argentina set the boundary along the high summits that separate the Pacific and Atlantic watersheds. Back then, however, neither country claiming sovereignty over Patagonia knew anything about it, nor did they know that the high summits aren't aligned with the watershed division. This led to a border dispute, arbitrated by the British. The Argentine and Chilean governments each rushed to send expeditions from Buenos Aires and Santiago to gather arguments in defense of their respective positions: the border should be located further to the west, along the high summits, according to the Argentines, and further to the east, following the watershed divide, according to the Chileans. This is why today, in large part thanks to the work of German geographer Hans Steffen[6], an important part of Chilean Patagonia is located to the east of the mountain range, contrary to what we were taught in school. This isn't the only misconception about Patagonia, nor will it be the last time Chile fails to understand what Patagonia is and what happens here. Not long ago, a certain Minister attempted to justify his proposition to turn us into some

[6] The practical application of the 1881 treaty, in which Chile and Argentina established the binational boundary as the "high peaks that divide the waters," faced significant challenges in the Patagonian region, where the line of high peaks did not coincide with the continental water divide. The arbitration of the King of England was sought, and both countries appointed experts to explore the area and assert their national interests in the arbitration award. To do this, the Chilean government hired the German geographer Hans Steffen, who conducted several exploration expeditions. Over ten years, Steffen traversed much of the interior of Aysén, exploring the Aysén and Mañihuales rivers in 1899, the Cisnes River valley between 1897 and 1898, the fjords south of the 46th parallel, and the Baker River valley between 1898 and 1899 (Chile - National Library of, Memoria Chilena).

sort of sacrificial territory by claiming that there is nothing here and that no one lives here.

According to the Región de Aysén Atlas (Chile - Aysén Regional Government, SERPLAC - GTZ, 2005), Aisén is characterized by the following eco-regions, from east to west:

1. Humid insular (coastal archipelagos in the north) and cold temperate humid (south of Taitao).
2. Temperate humid (western slope of the evergreen forested side of the mountains), Boreal humid, intermediate temperate humid, and temperate humid with cool summer and mesic conditions (this mix and form the area with the most agricultural activity).
3. Cold boreal humid (at high altitudes) on the eastern slope of the mountain range.
4. Cold steppe ("Pampa historically used for extensive livestock ranching")

There is also the snowy and tundra domain, mainly in the Patagonian Andes Mountain Range and above the vegetational limit. Thus, within a range of relatively few kilometers, the climate can shift from "cold steppe desert" to the evergreen forest along the coast, on the other side of the mountain range. This mosaic of transitions also extends to aquatic and marine ecosystems.

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CHAPTER 1

WESTERN PATAGONIA, OR CHILEAN PATAGONIA

Given Patagonia's recent rise to fame and the scarce knowledge that exists about Chilean Patagonia, there is no shortage of people and places claiming to be a part of it and even declaring themselves the "capital of Patagonia". Since the Argentinian side of Patagonia is clearly delineated by the Río Colorado, or Colorado River, – at the same latitude of the Region of Bio Bio–, some assume that the same northern limit applies to the Chilean side.

Foreigners have arrived in Chilean Patagonia and asserted, "we're going to Patagonia." What they mean is that they are traveling to the Argentine side, which has gained international fame since the expeditions of Magellan, Darwin, and Muster. Argentine Patagonia developed tourism and extreme mountaineering long before the Chilean side. To many people, Patagonia is synonymous with steppes, pampas, endless wind, heart-stopping mountains, and ice–the Patagonia of Pigafeta and Magellan's "Patagones", or of the Tehuelches.

The truth is that Chilean, or Western, Patagonia, with its characteristic mountains, ice, forests, waters, estuaries and archipelagos, remains relatively unknown. Perhaps the "Patagonia Without Dams" campaign is the reason why places that previously defined themselves as Araucanía, or Region of the Lakes, remarketed themselves as Patagonia in an attempt to jump on the bandwagon of Patagonia's rising fame.

In 1909 –113 years ago! – the German geographer Dr. Hans Steffen, professor at the Universidad de Chile and explorer for the Comisión de Límites de Chile, first distinguished Western Patagonia from its eastern counterpart after exploring a large part of the then-unknown region. His book, *Viajes de Exploración i Estudio en la Patagonia Occidental, 1892 – 1902* (1944/2010), included a map depicting his territorial demarcation.

His demarcation was used to defend the Chilean position in the border dispute between Chile and Argentina, and it somehow turned into the current border for both countries. Steffen's demarcations, of course, were not at all arbitrary, and he was always enthusiastic to talk about and teach regional geography.

In his definition, Steffen begins by recognizing that the term "Western Patagonia" had already been used by Vicente Pérez Rosales in *Essai sur le Chili* (Hamburg, 1875) and by the Chilean Navy, particularly in Commander Simpson's hydrographic charts. The term was also a part of the controversy with the Argentine expert, Moreno. To Steffen, "Western Patagonia is a mountainous region formed by movements of the earth's crust and tectonic disturbances, which genetically presents a stark contrast to the plateaus of Eastern Patagonia (Steffen, 2010, p. 8). Due to its composition, the territory also includes the western mountain range that dissolves into archipelagos, with the exception of the Isla de Chiloé, or Chiloe Island, which has a unique character and distinct landscapes, resources, population, etc.

> On the northern side, the limit is marked by the disappearance of certain characteristic features of its outer contours and the configuration of the terrain, making it easy to trace by following the depression that runs from the eastern side of the Lago de Llanquihue, between the Calbuco and Osorno volcanoes, through Lake Todos los Santos and the Peulla Valley, across the mountain range through the Perez Rosales Pass and continuing along the western arm and main axis east-west axis of Lake Nahualhuapi. (Steffen, 2010, p. 9)

It was more difficult for Steffen to delineate the eastern border because of its complex composition, running approximately from "the eastern end of the Lago Nahualhuapi, straight down south to the elbow of the great bend in the Río Chubut, beyond the Lelej, Esguel, Chergue and other mountain ranges, until the intersection of the Río Sengues" (Steffen, 2010, p. 10).

To the south, "the eastern ends of the Buenos Aires, Pueyrredon, Tarr, Viedma and Argentino lakes, and at the southern end passing through the eastern limits of the Sierra Baguales and the gulfs of Última Esperanza,

Skyring, and Otway to end near Punta Arenas in the Strait of Magellan" (Steffen, 2010, p.10).

According to Steffen, the southern limit would be the eastern side of the Strait, even though similar features can be observed in the Tierra del Fuego region and in Western Patagonia. Steffen didn't include the archipelagos south of the Strait of Magellan because he was not personally familiar with those regions. Thus, Western Patagonia stretches over a longitude of nearly 1,360 km and a latitude of 325 km, from the Taitao Peninsula to the eastern end of Buenos Aires Lake. The total area is about 300,000 km^2, a surface area similar to that of Norway.

This definition and territorial delineation were made on foot, in an area that was then largely unknown, without the technological means available today. It was an undoubtedly great achievement that, for the most part, remains relevant to this day, since what Steffen studied over a century ago is still not clear to us today.

Thus, in light of the legal and administrative inexistence of Patagonia, and in light of the continuous doubts and debates about its boundaries, the Ministry of National Assets commissioned a study to the Universidad de Chile that proposed—or concludes, based mainly on what Steffen stated – that Chilean Patagonia is comprised of the territory starting from the southern limit of the Province of Llanquihue, the Commune of Cochamó in the same Province, the Province of Palena, and the Regions of Aysen and Maguellan, with a total of 24 communes, an area of 25.8 million hectares [637.5 million acres], and more than 74 thousand kilometers of coastline. (Universidad de Chile-Facultad de Ciencias Agronómicas, Departamento de Ciencias Ambientales y recursos naturales renovables – Ministerio de Bienes Nacionales, 2013).

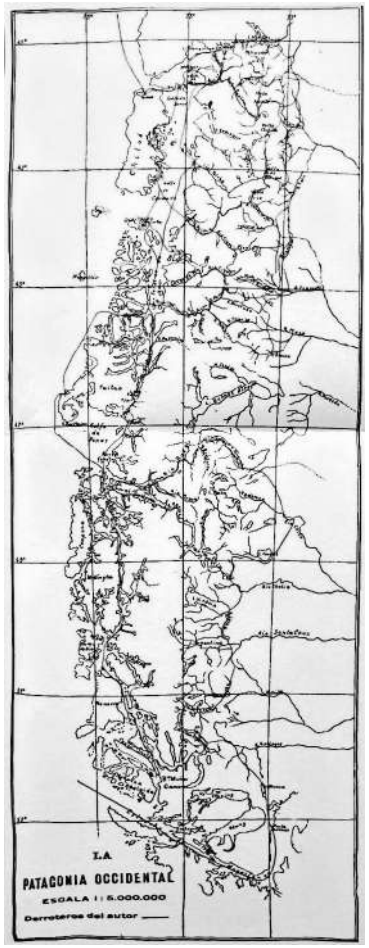

Figure 7

The territory of Western Patagonia and the routes travelled by Hans Steffen (2010)

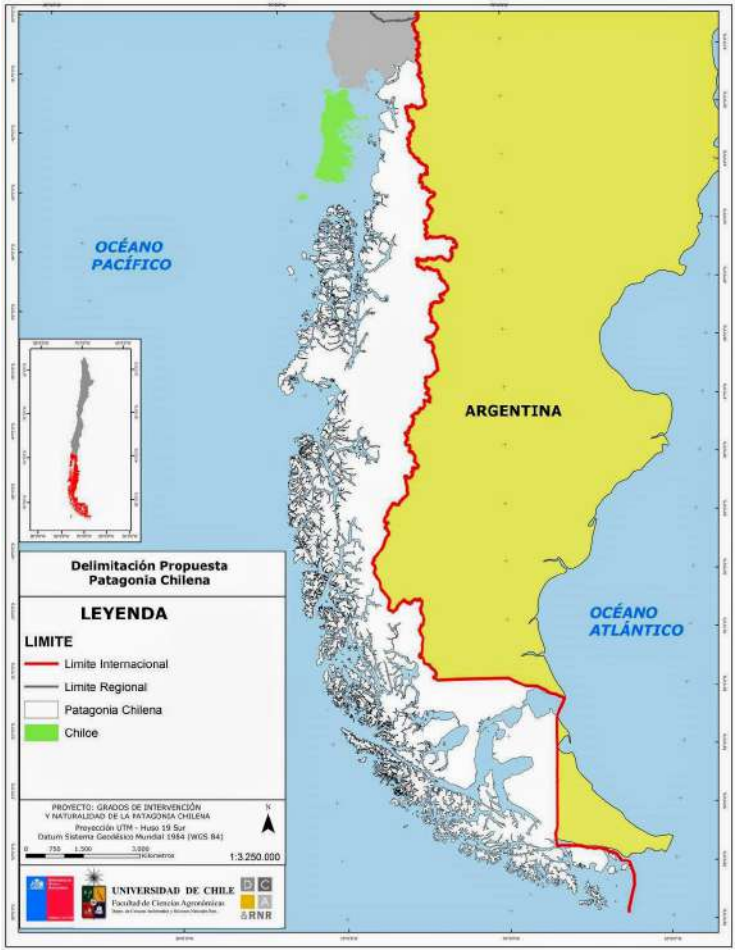

Figure 8

The boundary of Western, or Chilean, Patagonia proposed by the Degrees of Intervention and Naturalness in Chilean Patagonia Report (Universidad de Chile, 2013).

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CHAPTER 2

AISÉN RESERVE OF LIFE, FROM MOTTO TO PRACTICE

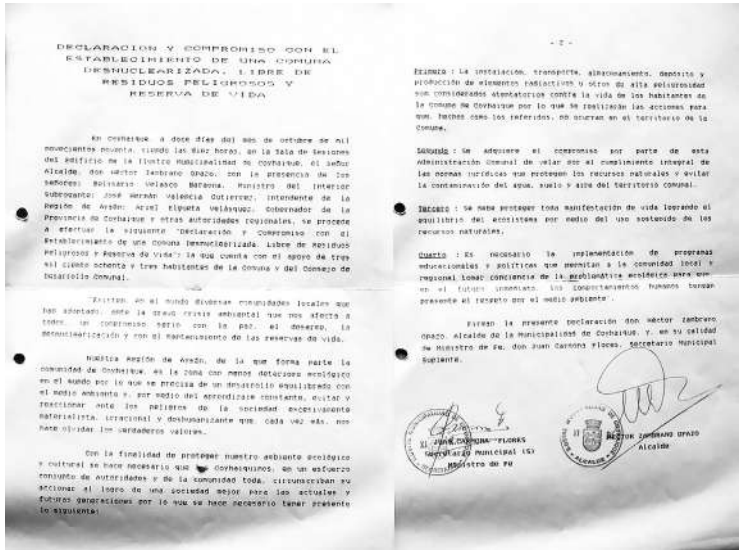
Origin – History

The idea of Aisén Reserve of Life, began, in part, as a reaction to "Gastre's Nuclear Dump" project. On October 12, 1990, after a long campaign, we were finally able to declare the Commune of Coyhaique a "No-Nuclear, Dangerous Waste-Free reserve of life".

Furthermore, it was also a way of elevating the status of the region, and of giving meaning to a distinct lifestyle that values—in every sense of the word– the exceptional qualities of the region. We wanted to highlight the importance of being different, to remember and return to an ethical way of life, of being, of sense of place, and to be able to transmit and contribute sustainable practices that have been forever lost in other places. This is the model of Aisén reserve of life. The words above imply that we should translate these abstract principles into regional practices, into being ourselves—authentic, coherent, less dependent and respectful of all forms of life.

Of course, Aisén reserve of life is also a valuable commercial image for local products.

In the past years, the concept of Aisén reserve of life has been adopted as a regional motto. It is a source of pride for the inhabitants of Aisén. Its impact can be seen in the region's Development Strategy as well as in authorities' and citizens' sensitivity toward nature. It has also been used as a warning to those who have tried to act against it (CODEFF, 2005).



DECLARACION Y COMPROMISO CON EL ESTABLECIMIENTO DE UNA COMUNA DESNUCLEARIZADA, LIBRE DE RESIDUOS PELIGROSOS Y RESERVA DE VIDA

En Coyhaique, a doce días del mes de octubre de mil novecientos noventa, siendo las diez horas, en la Sala de Sesiones del edificio de la Ilustre Municipalidad de Coyhaique, el señor Alcalde, don Héctor Zambrano Opazo, con la presencia de los señores: Bolivario Velasco Barzana, Ministro del Interior Subrogante; José Hernán Valencia Gutierrez, Intendente de la Región de Aysén; Ariel Figueta Velásquez, Gobernador de la Provincia de Coyhaique y otras autoridades regionales, se procede a efectuar la siguiente "Declaración y Compromiso con el Establecimiento de una Comuna Desnuclearizada, Libre de Residuos Peligrosos y Reserva de Vida": la que cuenta con el apoyo de trescientos ochenta y tres habitantes de la Comuna y del Consejo de Desarrollo Comunal.

"Existen en el mundo diversas comunidades locales que han advertido, ante la grave crisis ambiental que nos afecta a todos, un compromiso serio con la paz, el desarme, la desnuclearización y con el mantenimiento de las reservas de vida.

Nuestra Región de Aysén, de la que forma parte la comunidad de Coyhaique, es la zona con menos deterioro ecológico en el mundo por lo que se precisa de un desarrollo equilibrado con el medio ambiente y, por medio del aprendizaje constante, evitar y reaccionar ante los peligros de la sociedad excesivamente materialista, irracional y deshumanizante que, cada vez más, nos hace olvidar los verdaderos valores.

Con la finalidad de proteger nuestro ambiente ecológico y cultural se hace necesario que los coyhaiquinos, en un esfuerzo conjunto de autoridades y de la comunidad toda, circunscriban su acciones al logro de una sociedad mejor para las actuales y futuras generaciones por lo que se hace necesario tener presente lo siguiente:

- 2 -

Primero : La instalación, transporte, almacenamiento, depósito y producción de elementos radiactivos u otros de alta peligrosidad son considerados atentatorios contra la vida de los habitantes de la Comuna de Coyhaique por lo que se realizarán las acciones para que, hechos como los referidos, no ocurran en el territorio de la Comuna.

Segundo : Se adquiere el compromiso por parte de esta Administración Comunal de velar por el cumplimiento integral de las normas jurídicas que protegen los recursos naturales y evitar la contaminación del agua, suelo y aire del territorio comunal.

Tercero : Se debe proteger toda manifestación de vida logrando el equilibrio del ecosistema por medio del uso sostenido de los recursos naturales.

Cuarto : Es necesario la implementación de programas educacionales y políticas que permitan a la comunidad local y regional tomar conciencia de la problemática ecológica para que en el futuro inmediato, los comportamientos humanos tengan presente el respeto por el medio ambiente".

Firman la presente declaración don Héctor Zambrano Opazo, Alcalde de la Municipalidad de Coyhaique, y, en su calidad de Ministro de Fe, don Juan Cardona Flores, Secretario Municipal Subrogante.

JUAN CARDONA FLORES
Secretario Municipal (S)
Ministro de Fe

HECTOR ZAMBRANO OPAZO
Alcalde

Figure 9

Declaration and Commitment of the Nuclear-Free, Hazardous Waste-Free, and Life Reserve Coyhaique Commune, 1990 (Archivo CODEFF, Aisén, 2017).

Figure 10

People from Coyhaique travelling through the Argentine Pampa, protesting Gastre's Nuclear Dump, 1996.

'Aisén Reserve of Life' Seminar-Workshops

In 1997 we organized 4 Seminar-Workshops called *Aisén Reserve of Life* in the House of Culture of Coyhaique. The idea was to host a monthly meeting to facilitate the exchange of different voices and perspectives, giving meaning and depth to our words. There was a risk that we would be met with an empty shell of abstract words. But these discussions were worth organizing. Time has repeatedly proven that grassroots movements have stronger foundations when they are built upon collaborate initiatives like these. With this perspective in mind, we invited 46 leaders, regional authorities and political candidates with diverse political ideologies to participate.

We will now present the introduction to the seminar-workshop presentations—the presentations make it possible to understand the process we underwent at that time—and a review from an article in a tourism magazine.

The History of "Aisén, Reserve of Life": Motto, marketing tool, or profound conviction?

The first thing visitors see when they arrive in Aisén, in Western Patagonia, is most likely a welcome sign asking them not to pollute. The bottom of the sign reads "Aisén Reserve of Life". A short while later, after seeing the trash on the side of the road, this motto may seem contradictory and even empty. But the phrase actually becomes quite coherent once you learn more about the region. It may even be insufficient to describe those who, purely out of love and fascination, have left behind a promising career, the comfort of the family nucleus, and the pleasant climate of central Chile to exile themselves at the end of the world.

But, aside from attracting attention and curiosity, this sign prompts certain questions: Why do the people of Aisén call themselves a "reserve of life"? And how could they come up with such a crazy idea, surrounded by a jungle of cybernetic tigers and jaguars?

It all began in the 1980s, when death traffickers decided to locate a nuclear dump near Gastre, in the Argentine province of Chubut, some 400 kilometers away from Coyhaique. Their "visionary" idea found no support in Patagonia, where we may be naive, but not to that extent. There was strong opposition to this "novel" mega-project, which would supposedly spur development, progress, labor, investment, etc. But the so-called "enemies of progress", "emotional fundamentalists", "outdated hippies" and the entire "useless crowd" of self-proclaimed environmentalist with "enough time on their hands" to go around promoting citizen participation were able to declare the towns in Chubut – one after another– "non-nuclear". Today, even the constitution of the province forbids nuclear waste dumping.

Naturally, we in Coyhaique couldn't be outdone by our neighbors. After a long campaign, and with 10% of citizen signatures, mayor Hector Zambrano (in those years mayors were appointed by the president) finally declared on October 12, 1990, on the day of Coyhaique's anniversary, in front of his boss Belisario Velasco, the Minister of the Interior, that the commune would be a "No-nuclear, Dangerous Waste-Free reserve of life."

That day, we realized that our effort to protect life was, to many, a marketing strategy. We still wonder if this symbiosis is appropriate, but it is obviously a smarter move to sell Aisén's environmental qualities rather than destroy them.

Obviously, the municipal declaration was a reaction to imminent danger. But what about the phrase "reserve of life"? In all honesty, the motto feels like the result of some kind of divine inspiration, the product of constant meditation and conversations between friends about the essence of Aisén and about how we could promote and preserve its qualities. By the time of Chile's return to democracy, we were already presenting in every development seminar in Aisén. Today we conclude that our proposal has turned out to be quite reasonable.

Looking around the culturally hegemonic globe, where fleeting emotions, winning the lottery, consuming technology, and worshiping representations of plaster or plastic have become the goal; where one "lives" vicariously plugged into their "little square" of a screen; where love has been replaced with drugs and everything natural with artificial coloring, fragrances, and preservatives; where pavement, shopping malls and compulsive consumerism are erected as indicators of progress... loving, fostering, and preserving life, authenticity, and creation may seem unusual, outdated, and naively romanticized. Yet –perhaps

because we have not been "developed" enough in Aisén– we realize that the main value of this region lies precisely in being different, in persisting in the hope of preserving transcendental qualities, in remembering and returning to an ethical way of life in which we prioritize being rather than having, and in having the opportunity to contribute to a model built upon values that have been long forgotten in other places.

When we have experienced daily life in so-called developed countries and understood their essence and how power is maintained there, we painfully realize where our national efforts, with their pretension and crude imitations of these dazzling models, are heading. When we observe this, we become even more aware of Aisén's qualities. We can see that what many diagnose as a flaw or problem can become an opportunity, and these limitations can become great virtues that are now rare on the planet. We know that in many ways, the "gringos" are already coming full circle and yearning for those lost values that mysterious Patagonia still offers. For us, the successes of Bruce Chatwin's "In Patagonia" (1977/2004) and Luis Sepúlveda with "Patagonia Express" (1994) are no coincidence. The image of Patagonia is captivating; it turns you into a new pioneer or spits you out with its ruggedness and toughness. This is not a land for the indecisive or weak. There are not many regions like Aisén, composed of 85% mountainous terrain, glaciers, and rocky islands, where nearly half of the territory is comprised of Protected Wilderness Areas, where the geographical density of the population does not exceed 1 person/ km^2, where extensive, pristine areas still exist, where you find the purest air and water on the planet, and where life is still new and fragile after the last glacial thaw...

There are not many places that have been studied by foreign universities and have had the honor of being declared "an oasis in the midst of the world, where people can breathe and live

far from pollution and their own stubborn self-destruction" (attributed to the University of Lancaster, in CODEFF Aisén, 1998). In this region of recognized beauty and uncommon human qualities, several communes have also been declared "Capital of the Environment," "Ecological," and "Reserve of Life," just like Coyhaique.

Aisén's qualities have attracted more than a few modern-day Quixotes, dreamers of new utopias, who, like us, defend what they love and detest violence disguised as progress or hidden behind marketing. But Aisén has also drawn innumerable people from places where these virtues no longer exist, who are all too aware of what they have forever lost. The region has also attracted groups in search of adventure, like Raleigh International, and the NOLS School, which provides a model of field education – learning by doing – that emphasizes safety and environmental and cultural respect and is worthy of emulation.

It's intriguing that these "gringos" have chosen this place, alongside Alaska and Kenya. Something seems to be happening in Aisén, even if it is not yet fully recognized in Chile. In a sense, the world is upside down. While we in Chile gaze in admiration at the "first world," they are emigrating here in search of a sense of purpose that they don't seem to have found in their modern cities.

But let's not fool ourselves: Aisén inherited one-third of burned territory from the colonization period, and today, our main environmental problems are related to deforestation and erosion. Slowly, the problems of modernity have also arrived: the depletion of marine resources, pollution, consumerism, and alienation. It's clear that these problems were caused in the name of development and encouraged by centrist governments; remember the "fishing boom" and talk to the "old-timers" to be convinced. Poverty is another one of the "externalities" of this

short-term vision. And as if these problems were not enough, we have lately become regular patrons of global issues, such as the depletion of the ozone layer and climate change, byproducts of the "development" of our "idols.

We must admit that, as assured as we feel by the many breakthroughs that have come out of "Aisén Reserve of Life," there are times when we feel like we are trying to stop a steamroller with only a finger. And how can it not be frustrating when, even within the region, we increasingly resort to superficial solutions, the culture of gigantism, and short-sighted political and economic selfishness, which hinders us from seeing beyond the new paternalism of transnational corporations and big businesses?

But, while remaining realistic and setting pessimism aside, we see that today, in one way or another, Aisén's intellectuals and authorities have embraced the motto of 'Aisén Reserve of Life,' and many entrepreneurs have discovered that the motto adds value to their products. Tourism has risen, and Aisén residents wake up feeling proud to be living in such a valuable region. Even the Regional Development Strategy is environmentalist, and an above-average number of public services and companies are concerned about sustainability and pollution. "Aisén Reserve of Life" has also served as a warning to those who act or intend to act against this ideal. It's worth noting that there is a consensus on these issues in the region, and that Aisén is the birthplace of renown "green" leaders like Senator Horvath and the former Director General of the Agricultural and Livestock Service and current Deputy, Leopoldo Sánchez

By the way, all of this could be even better, and while there has been conceptual progress, there is still a long way to go to put our ideas into practice. That's what we're working on. We understand that this is a slow and difficult process, and as we say in Patagonia, "haste makes waste." "In the beginning was the word," and we

believe that you are what you want to be. Aisén will soon have to define its life project. Will the people of Aisén allow their region to become just like any other place in the world with the same problems? Can we continue to progress in complicity with destructive and predatory models? Will we be able to value what is unique to us and to search for our authenticity and destiny with dignity? The coming years will bring us answers, and they will not find us as mere witnesses.

Source: Text from November 1996 published in Forums-Workshop 'Aisén Reserve of Life,' CODEFF Aisén-AVINA, 2005

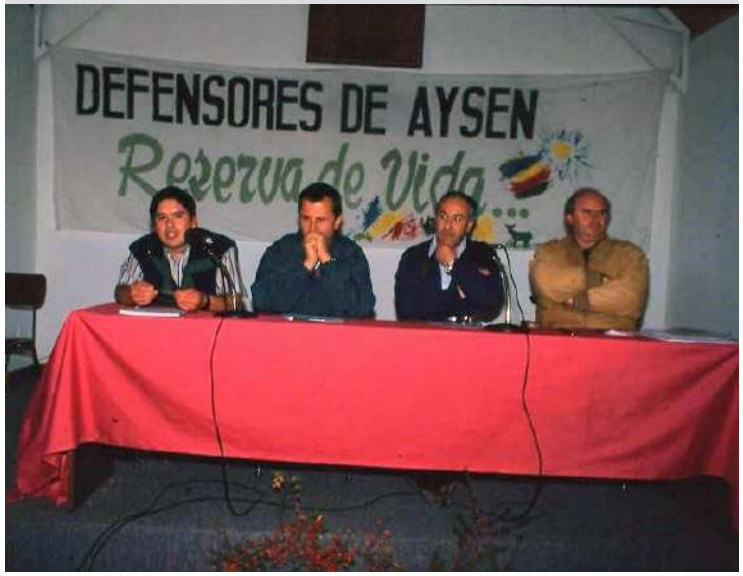


Figure 11
Participants of the Aisén Reserve of Life Workshop Panel in 1997. From left to right: H. Caballero, C. Hepp, A. Elgueta, P. Silva. .

Figure 12
Participants of the Aisén Reserve of Life Workshop Panel in 1997. From left to right: Senator Horvath, A. Ríos, H. Mladinic, Bishop L. Infanti.

Aisén Reserve of Life. To be or not to be?

When we refer to Aisén as a reserve of life and, in general, contemplate and discuss the future of the region, we often recall Hamlet's famous question: To be or not to be? We then ask ourselves: What do we want to be? Do we want to be a reserve of life, or not? Do we want to be New York, Santiago, Cancún, Macondo... among other places? Or do we truly want to be Aisén?

To be Aisén, to be ourselves, implies being authentic, original, and innovative. The challenge is to translate these words into our regional identity. It also means being consistent and not just sticking to words, slogans, and statements. It means avoiding "greenwashing." There are many other places in our own country that

have more or less credibly declared themselves eco-friendly or environmentally conscious, such as Pucón and Villarrica, for example. But we also come across the "environmentally conscious commune" of La Cisterna in Santiago and the VI Region, "the greenest in Chile," and we doubt whether these slogans are coherent or whether being environmentally conscious and green is just a trendy marketing strategy.

We certainly don't want the same thing to happen here. The opposite of coherence is falsehood and hypocrisy, and falling into that trap would turn us into a caricature. Coherence also implies being less dependent, being sustainable, and having direct democratic participation.

After clarifying who we are and our commitment to coherence, the inevitable question about "development" comes up – a word that is so overused and can mean such different things in Aisén. Development for what? For whom? Where do we want to go with this development? To become a reserve of life?

We believe that respecting life and fighting for it is a basic ethical principle, and if we are alive, we should be grateful and share in harmony with all forms of life. In this, we cannot fail to be coherent either.

When we debate the development of Aisén, we broach a topic that has an important economic component, and unfortunately, we often do not move beyond it. However, development inevitably has a cultural foundation and is based on the appropriate management of natural resources. Human development is a cultural response to our own

problems. If that development is not sustainable and does not improve the quality of life, it is also false.

Inevitably, sustainability involves acting responsibly as we attempt to reduce entropy, transitioning from a stage of intensive "colonization" of energy to a balanced climax.

When it comes to putting the 'Aisén Reserve of Life' initiative into practice, the following aspects are important to us:

- The role of the state in avoiding the flaws of the market and "setting the rules." Entrepreneurs need to know what they are investing in and what the rules of the game are. We must move forward by defining regional and local regulations and incentives; the authority to do so exists. We also need to strengthen the secondary environmental regulations that protect us, as granted by the Environmental Law.
- Economically, we need to stop being a colony and find a way to retain and reinvest the profits and taxes generated in the region. Attracting foreign investment is good, but it must be consistent with who we are.
- Sustainability is a top priority and should be taken seriously. Greenwashing is unacceptable.
- The recovery of resources destroyed during colonization, including marine resources, and the improvement of environmental quality; this is necessary in order to have a coherent green seal.
- Addressing the deficiencies in the existing quality of life, including poverty and equitable distribution of development within the social fabric. Maintaining the qualities of the current quality of life, some of which are rapidly disappearing (such as public safety).
- Making efforts to increase environmental awareness (environment = what surrounds us, the natural, the cultural, and the relationship between them). If we had this awareness, many of our current problems would not exist.
- Promoting a stronger sense of belonging, so that the people of Aisén love their region and "wear the jersey." Creating a constant flow of people coming and going without feeling a sense of commitment to the region has an adverse effect.
- Along with belonging, or as part of it, we need to understand the place where we live. To know the place and to have seen it is important, but understanding it means feeling it, wanting it, loving it. Those who love their region take care of it and make it greater.
- The values of solidarity, non-violence, and democratic participation in determining the future of the region.
- Territorial planning with a proper foundation, high-quality technical research, and informed citizen participation.

Specific Projects. Regarding specific and urgent project ideas to concretize the "Aisén Reserve of Life" initiative we have the following list:

- Basic studies to be able to intervene with knowledge.
- Dignify the regional/local by using local construction materials and by having public services make their acquisitions in the region; this will create jobs and employment here.
- Restore deteriorating resources: fishing, forests, water, soil.
- Sustainably manage existing economic activities.
- Enhance the existing potential, for example, the "best water on the planet" (bottling it); the landscape, the pristine nature, and various aspects that are often presented as

negatives, such as isolation and low population, can be thoughtfully turned into advantages.

- Environmental training and education for coherence and sustainability.
- Add value to local materials that are currently exported in a raw, unprocessed state, which does not generate development or create employment opportunities here. This could also add value to by-products, increasing the positive effects on employment.
- Increase the value of the region through environmental and/or sustainable branding, so that we can compete in the global market.
- Decentralize the region so that we don't emulate the flawed national model.

Encourage small and medium-sized companies, as well as craftsmanship, which are the main sources of work and employment in the country. Disincentives for activities that are not in line with the reserve of life initiative.

- Promote cooperation, fostering greater solidarity.
- Encourage increased citizen participation.
- Strengthen the region's basic economy and self-sufficiency. Greater concern for the microeconomy of the region.
- Conduct Quality of Life Surveys to establish a baseline and clarity on positive aspects to preserve and negative aspects to overcome. Implementation of sustainability indicators and a regional environmental accountability program.
- Promote socially and environmentally appropriate technologies, incentivizing small-scale energy production.
- Preventative health programs and natural medicine.

We also have another list of specific, feasible actions to take. In any case, we have a clear conscience about the initiative that we have taken and the coherence with which we have been working and implementing what we propose. We don't just philosophize or theorize; we also demonstrate.

Perhaps our proposal, for those accustomed to the spectacular displays offered by the current system, may seem different. Well, it is. At this point, we believe that the only responsible form of development is simplicity. The insignificance of filling ourselves with things and worshiping money is evident. There are not enough resources for everyone to become millionaires or to have American living standards.

Finally, we would like to present two ideas that we have been working on. The first is the 'Aisén Reserve of Life' Action Fund, with which we have funded some small projects using our limited resources. With private contributions and contributions from the Regional Development Fund, for example, this fund could be substantially increased. It would be similar to the Regional Fund for Culture and the Arts, but with a different purpose.

The second idea is to create a movement for 'Aisén Reserve of Life.' The movement of the Defenders of Aisén Reserve of Life, who would commit to working toward:

- Sustainable and coherent development aimed at improving the quality of life and cultural roots of Aisén residents.
- Conserving, preserving, restoring, and promoting the environmental qualities and cultural values of Aisén.
- Reestablishing social and natural harmony based on enduring values of respect for life, solidarity, attachment, and being instead of having.
- A non-nuclear region, free from toxic and hazardous waste, and a reserve of life.

Source: Presentation Forum Aisén Reserve of Life, 1997, CODEFF Aisén – AVINA, 2005.

Aisén Reserve of Life as center, path, and destination

The following text is a column from the El Divisadero newspaper during the Social Movement of Aisén in 2012.

Mediating on what has happened in the past few weeks [March of 2012], on the back-and-forth, the tug-of-war, the grand gestures and petty demonstrations, on the proposals and solutions versus hatred and violence, I always end up in the same place: our frame of reference, our north and center, our regional future and objective should be the grassroots proposal 'Aisén Reserve of Life.' Certainly, this also serves as a "test of purity" for our actions in the current situation. Contingency, as usual, makes us forget the importance of the main issues: blinded by recent events, many doubt the existence and viability of this utopia.

This has happened several times before. Years ago, in the middle of the 'Patagonia without Dams' campaign, while we were - as usual - straying from our path, Father Bernardino Zanella reminded us that our focus should be on the positive initiative of life and development for, with, and by Aisén. Now that something similar is happening, I want to review our petition, our methods of action, and our solutions in light of a framework that goes beyond current events. This is not to diminish the importance of what has been achieved, the successes, and the excellent performance of the leaders of the current social movement. Furthermore, I declare my admiration for the character of Iván Fuentes. What I admire most in him, apart from his

humility, is his relentless positivity: worthy of a reserve of life...

I say the above because we sometimes lose sight of the fact that short-term economic success has to have long-term direction. An example that I have been mentioning for some time is the issue of dependency (on fuel, food, and even on the capital!).

Therefore, it is worth remembering the general framework and declaration of principles regarding 'Aisén Reserve of Life,' collectively drafted five years ago [2007]. I don't remember if it has ever been published in the media, but it's never a bad idea to recall it:

Those of us who believe that 'Aisén Reserve of Life' is the solid foundation of our local sustainable development model and our identity, where humans, in harmony with the environment and their community, attain conditions to fully thrive in peace, drawing on the legacy of our ancestors and respecting the diversity of possibilities that future generations will find, declare that:

'Aisén Reserve of Life' is the result of a collective construction strengthened over many years of efforts, successes, mistakes, and multiple consensuses, open to new contributions based on values that allow human beings, without distinction, to access a territory where the quality of life for current and future generations is guaranteed.

'Aisén Reserve of Life' is the foundation for the full development of the human being, promoting dignity, social equity, cultural identity, and citizen participation in the construction of public policies that favor educational processes, strategies, and plans to achieve sustainable development.

'Aisén Reserve of Life' is the best investment and a good deal for everyone; it is a national project for and by Chile that seeks development based on the harmonious

and responsible use of natural resources through human-scale economic activities that create dignified work, profitable businesses in all productive areas, and conscious consumption as the basis for sustainability.

'Aisén Reserve of Life' promotes the integral relationship of people with nature by preserving, protecting, and restoring biodiversity, soil, air, and water quality, and the landscape, recognizing our exceptional and yet fragile environmental qualities.

For the aforementioned reasons, out of love for the Aisén Region and Patagonia, and guided by reason in the service of the common good, we reaffirm that:

Ethical individual and collective, entrepreneurial, and political actions and decisions, based in consistency, coherence, solidarity, and universal cooperation, whose contributions, actions, and work help defend and value the irreplaceable natural heritage of this territory and benefit inhabitants as well as visitors, are necessary to create an indispensable source of sustainable development for all and forever.

Column in El Divisadero, March 2012.

Figure 13
AVINA Patagonia Collective Work Declaration, Coyhaique, 2007

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CHAPTER 3

THE NATURAL AND CULTURAL QUALITIES AND VALUES OF AISÉN. AISÉN RESERVE OF LIFE PROJECTS AND PROCESSES

Aisén's natural qualities and values

The Aisén region boasts exceptional environmental qualities, including:

- 85% of mountainous terrain, glaciers, and rocky islands (Chile - IREN - CORFO, 1980).
- Exceptional and fragile environmental qualities, globally significant for conservation (World Wildlife Fund for Nature, WWF - World Bank, 1995).
- 11,500 km^2 of ice fields and glaciers, which constitute the "third pole of the planet" and, along with the lakes, represent the second or third largest reserve of freshwater on the planet.
- Lake General Carrera is the second largest in South and Central America. Lake O'Higgins is the deepest in the Americas. The Baker River is the most voluminous in Chile.
- The purest water and air on the planet in most parts of the region (Universidad Austral de Chile, 1998 and N.G. f/d).
- Vast pristine areas unknown to science.
- 48% of its surface area (51,500 km^2) has been declared a Protected Wilderness Area: 7 National Parks, with one in progress, 11 National Reserves (with 2 undergoing reclassifications to integrate with the National Park in progress), 2 Natural Monuments, and 2 Nature Sanctuaries: Marble Chapel and Quitralco. Additionally, Lake San Rafael National Park was declared a Biosphere Reserve by the United Nations Educational, Scientific and Cultural Organization (UNESCO). An extensive area, including the

Northern and Southern Ice Fields, will be nominated as a UNESCO World Heritage Site (CONAF, National Monuments Council).

- Internationally recognized and diverse scenic beauty.
- The largest national surface area of valuable and scarce temperate forests: 47,000 km^2, unique in South America (0.9% of the world's forest) and of great ecological importance due to its high endemism, climate regulation, features of the landscape, and status as a conservation priority (CONAF et al, 1994; Neira et al, 2002).
- Vulnerable steppe grasslands and temperate rainforests, which are a global conservation priority (WWF-Word Bank, 1995)
- A richly diverse ecosystem (Gastó, 1993 in CODEFF 2005).
- A refuge for various at-risk native animal and plant species at risk, including the Huemul, Pudú, Huillín, TucoTuco, Geoffroy's Cat, Guiña, Colo Colo, Culpeo Fox, Martineta, Coscoroba Swan, Peladilla, Tineo, and Guaitecas Cypress.
- 66 native plant species, lichens, and ferns and 10 endemic animal species (unique to this part of the planet) (National Museum of Natural History, 1998 and 2012).
- At least 80,000 linear kilometers of coastline, spanning over 35,000 km^2, making it the largest of the three estuarine or fjord zones on the planet, and containing a high level of unknown marine biodiversity prioritized for global conservation (WWF, 1995; The Nature Conservancy (TNC) - United States Agency for International Development (USAID), 1999 / Nitklischeck, E. 2017). The coastline south of the Taitao Peninsula is recognized globally as a unique ecoregion (TNC - USAID, 1999).
- The Gulf of Corcovado and its vicinity are home to the most important Blue Whale area in the Southern Hemisphere (Hucke, 2003).
- The largest paleontological site in Chile in Mallín Grande (Personal communications with E. Bostelmann in 2015 and 2017) (CODEFF, 2005)

Las siguientes fotografías ilustran estos valores:

Figure 14

Rocks with lichen and moss; this is how ecological succession begins. Aisén is something similar, an enormous rock with life trying to hold onto it.

Figure 15

"Fosforito" lichens, one of the many varieties in Aisén.

Figure 16

View from the top of Cerro Picacho, where one can see the scarcity of mountain valleys in the Patagonian mountains.

Figure 17

Meullin and Yulton Lakes and Cai Volcano, one of the most beautiful landscapes near Puerto Aisén.

Figure 18

Condor and mountain peaks of the northern ice field.

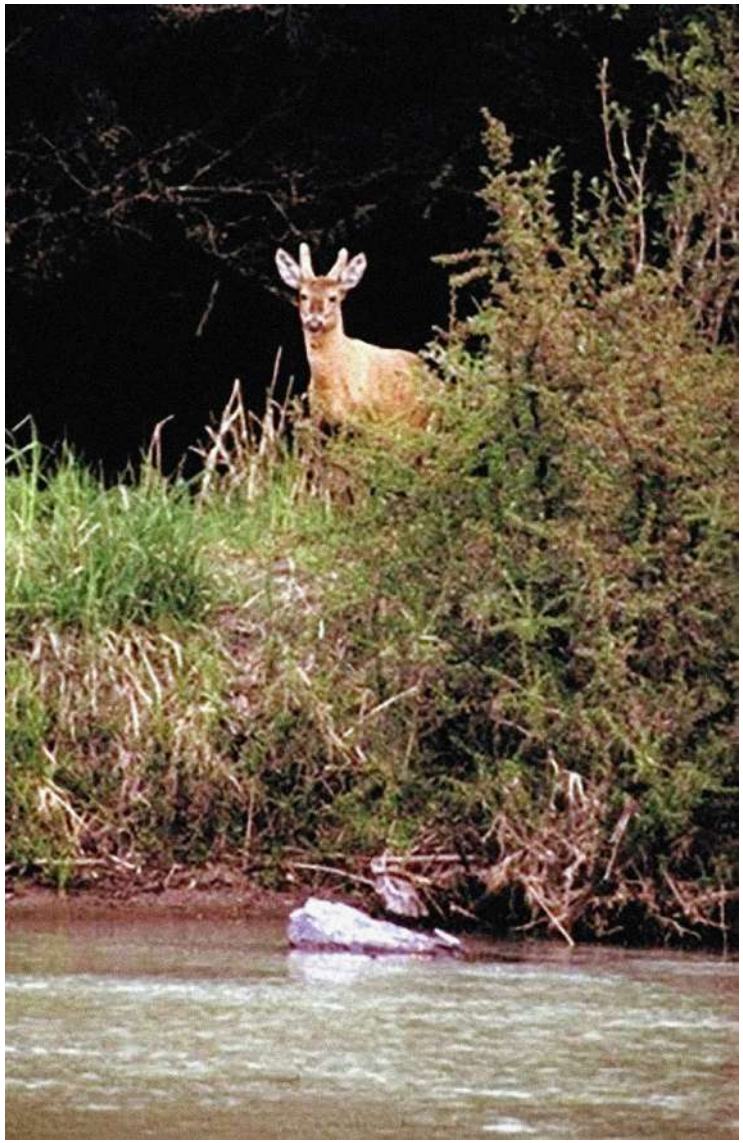

Figure 19

Huemul in the Baker River.

Figure 20

River, lake and glaciers on the eastern side of Laguna San Rafael National Park, Biosphere Reservoir (UNESCO)Rafael, Reserva de la Biósfera UNESCO.

Figure 21

Patagonian steppe in Fachinal, General Carrera Lake.

Figure 22

Venus Lagoon, Coyhaique National Reserve, deciduous beech forest in autumn.

Figure 23

Coicopihue (Philesia magellanica).

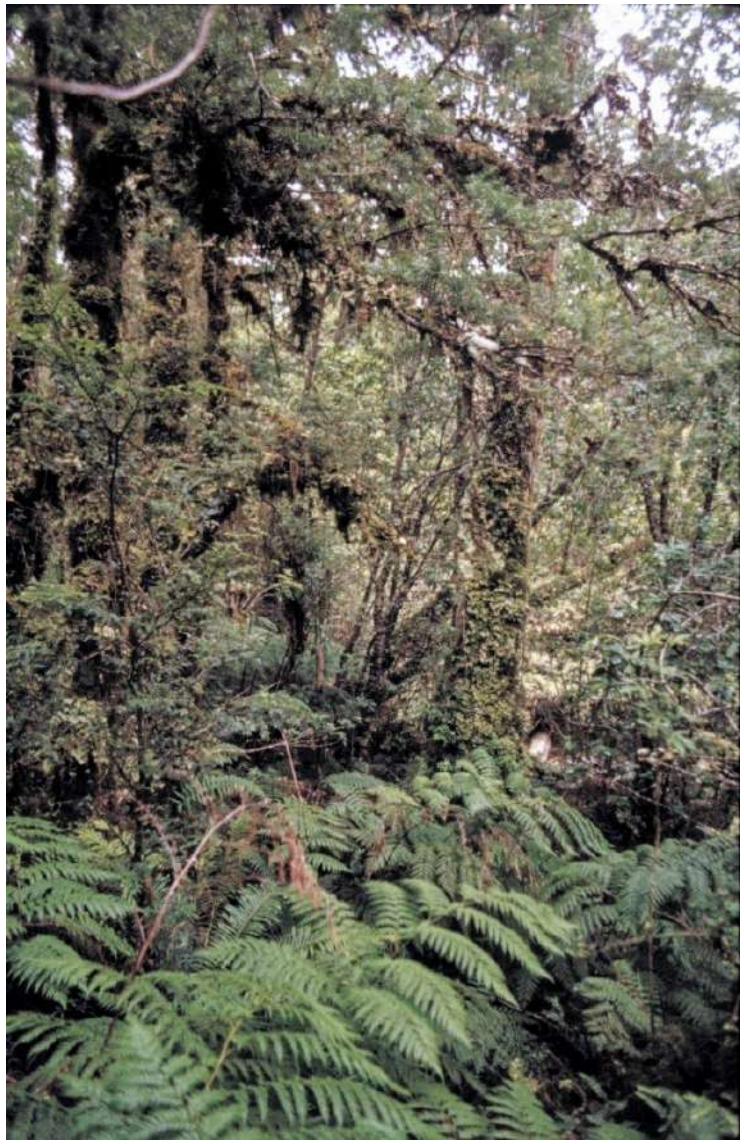

Figure 24

Coastal evergreen forest.

Figure 25

Marble Chapel Nature Sanctuary.

Figure 26

Coastal estuary and archipelago in northern Aisén.

Figure 27

Confluence waterfall of the Baker River, the most voluminous river in the country, and the Nef River from the Northern Ice Field.Campo de Hielo Norte.

Aisén's cultural qualities and values

The cultural and social qualities of the inhabitants of Aisén can be summarized as follows:

- Important archaeological sites of indigenous peoples and their legacy in place names, customs, and wisdom. Important historical sites of the "Western" settlers or colonizers.
- The settlement of Aisén was, in general, the result of acts of bravery (and sometimes of desperation) and required great sacrifices. The pioneers brought important values such as integrity, strength, and ingenuity in the face of adversity, unity in the face of usurpation, and self-defense. Today, Aisén needs pioneers of the present and the future.
- Low population density: 0.8 inhabitants per km² (2002 Census) and isolation, which shapes the humans that inhabit it in a unique way and instills them with a sense of autonomy that allows them to easily solve problems. However, the ecumenical density (on productive land, according to IREN-CORFO 1980 and CODEFF Aysén, 1989) was 4.3 hab/km²; thus, the population factor (the relationship between the number of inhabitants and the population capacity according to the land: 1 = balance) of the region in 1982 was 2.45, indicating soil overexploitation and/or the presence of an important primary mining or fishing sector or secondary industrial or tertiary service sector (at that time, only public services and the armed forces).
- A melting pot of cultures: indigenous Kawésqar-Chono-Huilliche, Tehuelche, cattle ranchers from the endless pampas, Chilote rural and maritime culture, southern farmers, the Mapuche of "the frontier," the huaso, military personnel, carabineros, and public officials, along with the contribution of foreign settlers who coexist at the end of the world seeking their own identity and thus forging Aisén's cultural heritage with its own imprint.
- Some unique values, especially of farmers and fishermen, include their polyfunctionality or adaptability, empirical knowledge, understanding and closeness to nature and its rhythms, independence, freedom, self-sustainability, sensitivity, perception, and humility.
- The hope of being able to contribute to building a better world.
- A Typical or Picturesque Area. Caleta Tortel and Historical Monuments: Isla de los Muertos (The Island of the Dead) in Tortel, Ibáñez Bridge in Puerto Aisén, Pedro Quintana School in Coyhaique, Puerto Cristal Mining Camp, Port Warehouses of Río Ibáñez, Old School of Cerro Castillo, Ludwig House of Puyuhuapi, Manor House of the Alto Río Cisnes Ranch, Constructions (8) of the Industrial Society of Aisén in Coyhaique, Land and Colonization Office of Puerto Aisén, San Carlos del Baker Pass, Submerged heritage of over 50 years old (National Monuments Council, CMN, 2014). (Many of the cultural values were suggested by anthropologists from the University of Chile, F. Brautigam, and M. Osorio) (CODEFF 2005)

In the following pages, some pictures illustrate the aforementioned characteristics and values.

Figure 28

Guadal cemetery, where rests more than one pioneer.

Figure 29

A meeting in the river Baker, 1982

Figure 30

Family and guests gathered around the wood stove.

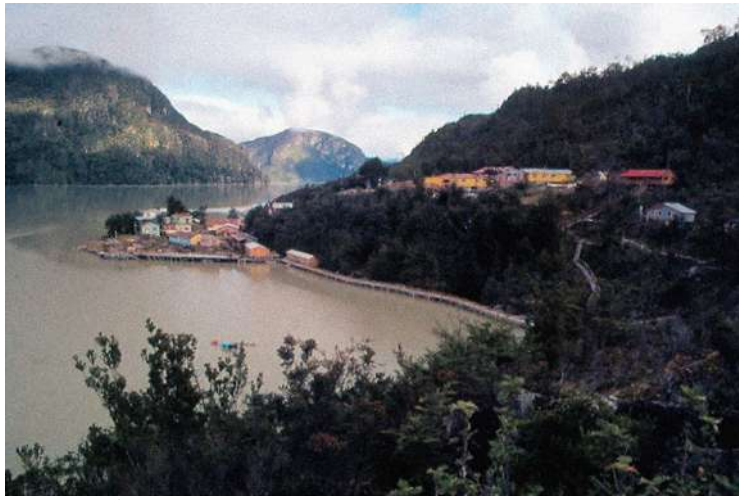

Figure 31

Caleta Tortel in 1986, prior to its declaration as Typical Zone in 2001.

Figure 32

Pared de las Manos, Cerro Castillo, prehistoric aonikenk paintings from 5.000 years.

"Aisén Reserve of Life" projects and processes

- To anchor our aspirations and motto in theoretical and conceptual content.
- To educate and work toward a culture of greater environmental sustainability.
- To defend and preserve regional values and qualities.
- To propose and execute a sustainable development plan at the regional, national, and international levels.

The initiatives that have been developed in the working perspective of 'Aisén Reserve of Life' are presented below, including those generated directly by CODEFF Aisén and those carried out by other citizen organizations. Undoubtedly, many more initiatives have emerged and continue to emerge spontaneously, all in perfect harmony.

Actions undertaken by "Aisén Reserve of Life"

- 7 Artistic-Ecological Encounters.
- 5 Forum - Workshops with public figures and regional leaders.
- 1st Seminars on Natural Tourism, Native Forests, Water as a Common Good, and the Value of Aisén as a Life Reserve of the Planet.
- 7 years of the radio program "Exploring Hope," plus 4 years of its previous counterparts.
- Various courses, workshops, and conferences on the Environment, Sustainable Development, and Quality of Life, with the participation of leaders and organizations such as M. Max Neef, H. Contreras Manfredi, J.P. Orrego, P. Serrano, Center for Research

and Teaching of Sustainable Agriculture (CIESA), Greenpeace, CODEFF.

- Constant publications and columnists in regional newspapers, 15 booklets on environmental education and natural and cultural heritage, a Manual of Integrated Orchards, a Network of Interdependencies between Nature and Culture, Exotic Wildlife, Max Neef, postcards, and photographs.
- Collaboration and participation in at least 10 documentaries filmed in the region.
- The creation of the Río Claro Protected Area for the Conservation of the Huemul and the promotion of the Private Protected Areas Network.
- Research and Dissemination Project of Medicinal and Aromatic Plants of Aisén: Herb garden, dryer, and an herb laboratory.
- Projects: Music and painting of Aisén Reserve of Life, Research and Dissemination of Medicinal and Aromatic Plants of Aisén, Environmental Education and Actions for the Tourist Development of Cerro Castillo, Environmental and Tourist Prevention and Preparedness in Tortel, Integration and Preparedness of the Río Paloma-Lago Caro sector for Sustainable Tourism, Environmental Recovery in Cerro Rosado.

Among the results of these projects are over twenty beautiful songs and paintings, over ten successful folkloric gatherings, the National Monuments of Isla de los Muertos and Caleta Tortel, the Quality-of-Life Survey of Caleta Tortel, an herb garden and herb laboratory, a Zone of Tourist Interest under study, and about twenty community tourist guides.

In addition, there are several projects and activities carried out under the concept 'Aisén Reserve of Life' by other grassroots organizations, companies, and individuals:

- Artisanal fishing management.
- School of Guides of Patagonia (www.escueladeguias.cl).
- Local Development Council and Leadership School of Puyuhuapi.
- National Tourist Interest Zone - General Carrera and Bertrand Lakes (Corporación Costa Carrera).

- Various folkloric gatherings throughout the region.
- Nature Sanctuaries of Quitralco and Marble Chapels.
- Historical Monument Paso San Carlos del Baker (Osorio, M., Hartmann, P.).
- Proposal for Patagonia National Park with the acquisition of Estancia Valle Chacabuco. Corcovado Park. Patagonia Park Network.
- Pitipalena-Añihue Coastal Marine Protected Area, Tortel ASMCP project.
- Solid waste separation and recycling system of La Junta and Puyuhuapi
- A large number of organic vegetable, livestock, and food producers.
- Flavors of Aisén.
- RICER Historical Restaurant.
- The Green Spot.
- Coyhaique Music School.
- Letter on Water from the Bishop of Aisén.
- Mingalegre.
- Sustainable Tourism Association of Cochrane..

The many initiatives that have been developed in the process of sustainably developing the Aisén Region, whether by natives or newcomers, share the values of love for Aisén, for this land, and those who live here; hope for a prosperous present and future (not only materially); prioritizing the common good over individual benefit; a desire to do something to fulfill collective dreams; and a commitment to the ethics associated with Aisén Reserve of Life.

The following photographs illustrate these activities:

Figure 33

Mayor Zambrano declares Coyhaique Nuclear-Free and a Reserve of Life.

Figure 34

Our first environmental education project, with PNUD-CENPROS and women from Coyhaique, 1993.

Figure 35

Work in fishing camps along the northern coast with UACH, 1994, Filomena Island.

Figure 36

At the fishing camp of Puerto Gaviota with UACH, 1994.

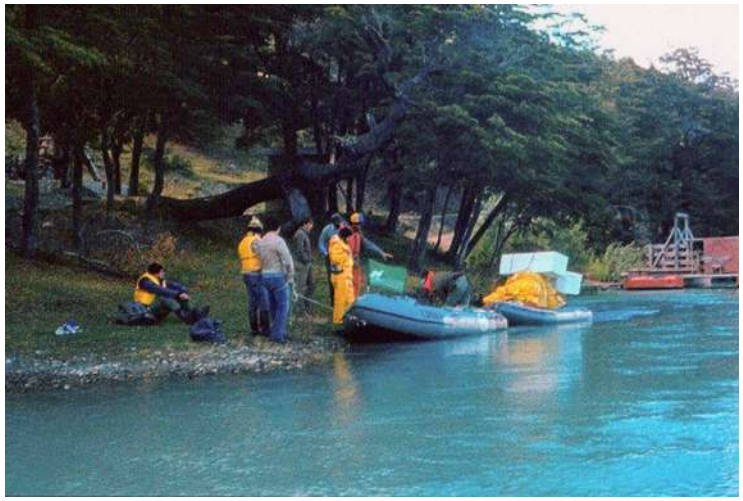

Figure 37

Huemul Research expedition in Baker-Tortel-Glacier. Steffen, CODEFF, 1984.

Figure 38

Huemul Research expedition in Baker-Tortel-Glacier. Steffen, CODEFF.

Figure 39

"Exploring Hope" Radio show, broadcasted in many local radio stations from 1994 to 2001. PHS with Gianella Saini and Hernán Ríos.

Figure 40

Environment Day in Coyhaique.

Figure 41

Windbreak planting activities in Cerro Castillo, 1997.

Figure 42

Environmental education activities with the Cerro Castillo community, 1997.

Figure 43

First Traditional Encounter at Cerro Castillo, outdoor activity.

Figure 44

First Traditional Encounter at Cerro Castillo. Exhibition of local craftsmanship.

Figure 45

At the Government Palace, La Moneda, with the support of the Americas Foundation.

Figure 46

Declaration of Caleta Tortel as a Typical Zone at "La Moneda" by President Lagos, with the participation of community representatives.

Figure 47

Aromatic and Medicinal Plant Garden, Coyhaique, CODEFF Aisén – FIA Project, 2004.

Figure 48

Herbs and Medicinal Plants Dryer.

Figure 49

First Ecological Artistic Gathering in Coyhaique, 1990.

Figure 50

Ecological Artistic Gathering in Coyhaique.

Figure 51

Ecological Artistic Gathering in Coyhaique.

Figure 52

Ecological Artistic Gathering in Coyhaique.

Figure 53

Rafting regatta on the Simpson River, part of some ecological-artistic encounters.

Figure 54

The latest Ecological Artistic Gathering in Coyhaique.

Figure 55

CODEFF Bird watching.

Figure 56

Meeting in the forest with educator Carlos Prosse R.

Figure 57

Works in small squares of Coyhaique with "Group 4 for Ecology."

Figure 58

Meeting between CODEFF executives and Environmental Minister Ana Lya Uriarte on Patagonia as a World Heritage Site.

Figure 59

Work with young people.

Figure 60

Peace March in downtown Coyhaique.

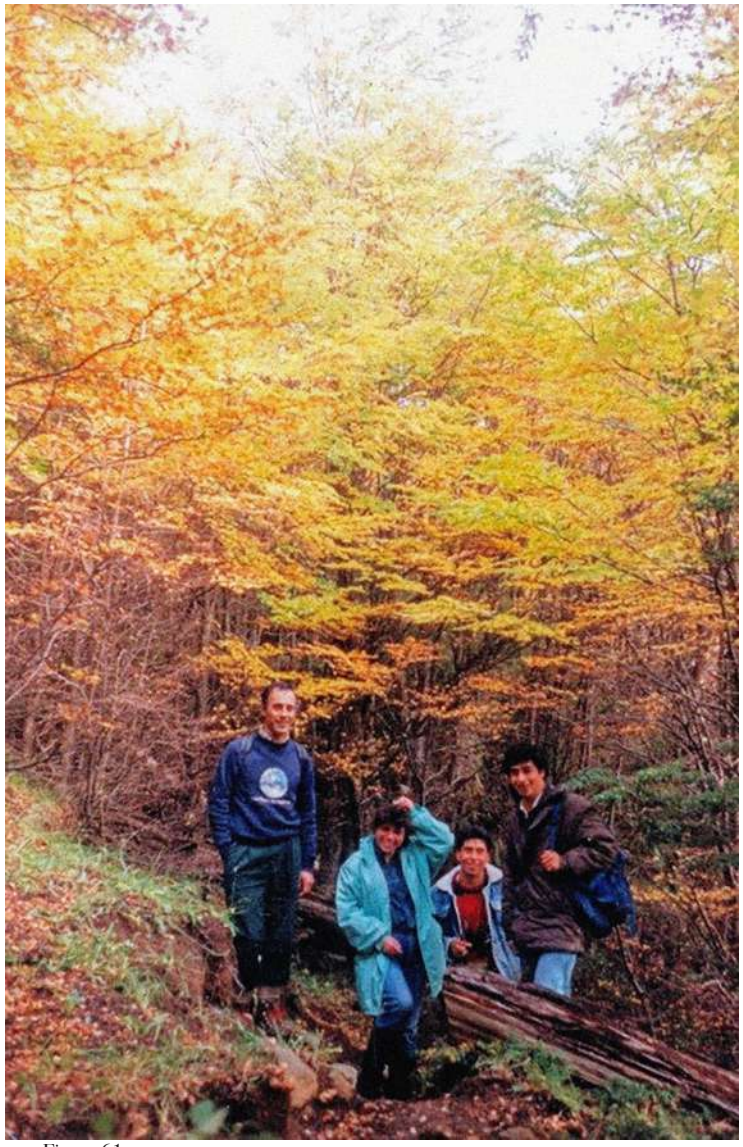

Figure 61

Works in the area of protection of the huemul of Río Claro.

Figure 62

Work in the area of protection of the huemul in Río Claro.

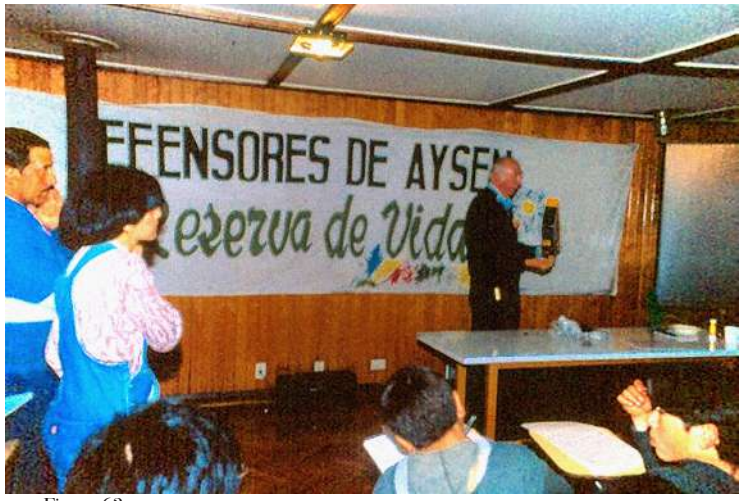

Figure 63

One of the conferences by Mr. Hernán Contreras Manfredi, pioneer and 'guru' of Chilean environmental education.

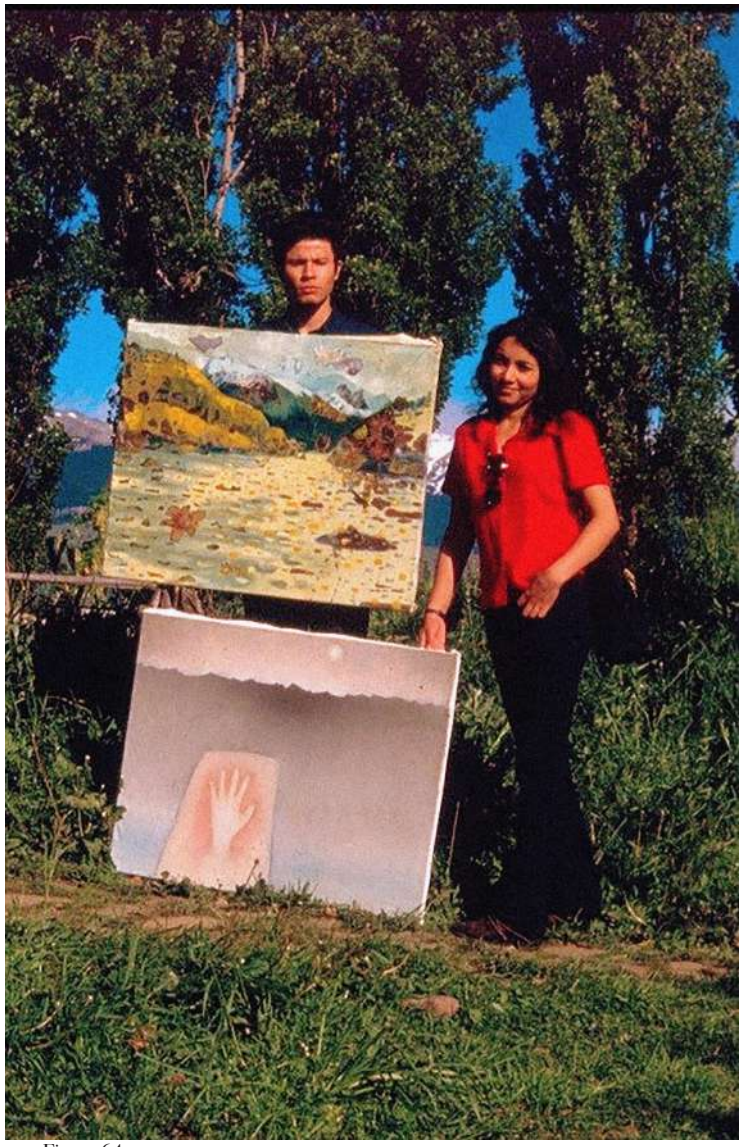

Figure 64

Promising artists "Painting Aisén Reserve of Life", FONDART project

Figure 65

One of the conferences, this one in Coyhaique with regional authorities present, by Manfred Max Neef, recipient of the "Right Livelihood Award".

Figure 66

Expedition in search of huemules after the eruption of the Hudson volcano, August 1991.

Figure 67

Supporting British environmental cyclists.

Figure 68

The Green Spot, a pioneering initiative for the production and sale of organic products.

Figure 69

Environmental education work at a school in Coyhaique.

Figure 70

Environmental education at the Natural Monument “Dos Lagunas”.

Figure 71

One of many environmental meetings, workshops, and seminars in which we have participated.

Figure 72

Cultural event for Aisén Reserve of Life. Museum of Contemporary Art, Santiago, 2001.

Figure 73

Cultural event for Aisén Reserve of Life, Santiago, Chile.

Figure 74

National Ecological Action Network meeting.

Figure 75

P. H. S. in Washington, U.S.A., with Latin-American environmental leaders, invited by Ashoka, 1998.

Figure 76

In Holland, world-wide meeting with NGOs on energy.

Figure 77

P. Hartmann S. presenting at the World Social Forum in Porto Alegre.

Figure 78

Patagonian Articulation, participants in the World Social Forum, 2005, Porto Alegre, Brazil, invited by AVINA.

Figure 79

Our logo and motto for the World Social Forum in Porto Alegre. This logo was designed by Francisco Croxatto based on proto Aonikenk rock paintings (Hand and La Guanaca).

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CHAPTER 4

INCONSISTENCIES OR INCOHERENCES WITH AISÉN RESERVE OF LIFE.

Regrettable Events

We mourn the following events:

- The extinction of the Chono, Tehuelche (Aonikenk), and Kaweskar indigenous peoples.
- The burning and over-exploitation (95%) of the Guaitecas cypress in the northern coastal areas since 1860.
- The hunting and destruction of wildlife habitats, leading to the endangerment of species (Two-haired sea lion, Leopard Seal, Elephant Seal, whales, Marine Otter, Huillín, Geoffroy's cat, and Wildcat, Coscoroba Swan, Culpeo Fox, Tuco Tuco, and Huemul).
- The 3 million hectares burned in the past century with the support of the State and the consequent erosion, siltation, death, and rural poverty.
- The introduction of exotic species that have become pests and ecological hazards (mink, salmonids, red tide dinoflagellates, earwig, rats, hare, pheasant, daisy, gorse).
- The "fishing boom" of the 1980s, which led to the collapse of fisheries for hake, conger eel, loco (Chilean abalone), and pilchard, resulting in ongoing fishing crises, poverty, and social and cultural problems inherent to the implementation of the industrial economic model.
- The incorporation of didymo algae, or "rock snot," to the exotic species.
- The invasion of protected forestland and marine areas by damaging livestock, fishing, and salmon farming industries.

- The pollution of landfills, sewage, industry, mining, and salmon farming.
- The overgrazing and abrasion of land, desertification, and exploitation of forests.
- The alienation and loss of cultural values, identity, and traditions.
- Climate change, the ozone layer erosion and its consequences.
- Various recorded negative social indicators, such as alcoholism.
- Coyhaique becoming the most polluted (smoke) Chilean city.
- The monopoly and control of regional resources by external and international companies.
- The 'cemetery' of whales and fish in the Gulf of Penas.

Figure 80

The consequences of a forest fire: erosion, poverty, and neglect.

Figure 81

Fishing settlement in the "fishing boom" of the early 1990s.

Threats

We consider the existence of the following threats:

The process of globalization and international and national greed for resources has turned the Aisén Region into a "frontier of development," as well as into a backyard or warehouse from which resources are extracted without any knowledge about them or about the place being altered and destroyed.

When "globalization" is synonymous with a neoliberal economic model, unregulated capitalism, neocolonialism, environmental and labor deregulation, taking advantage of low costs and franchises, and corruption, and "development" is synonymous with destruction, predation, "bread for today, hunger for tomorrow," wealth for others and problems for the region, it's better to be cautious and avoid them!

Because we are a "frontier of development," we have had the dubious "honor" of receiving projects like the Nuclear Waste Repository, mega-fishing vessels, the "fishing boom," and Alumysa, which are still pending or reappear in other forms.

There's also the expansion of salmon farming along the coast, with its effects and impressive propaganda campaigns, the concession of state forests to demonstrably unsustainable companies, the over-exploitation of sea urchins, rampant urban development, mega-dam and hydroelectric projects on the Baker and Pascua rivers (and possibly other rivers). All of these projects, in their current forms, are not sustainable or consistent with the ideal of 'Aisén Reserve of Life' (CODEFF, 2005)

This passage references the document "Aisén Reserve of Life y Patrimonio Mundial (Pamphlet)" from the Committee for the Defense of Fauna and Flora (CODEFF), dated 2005.

CHAPTER 5

AISÉN AND LAND PLANNING

The Aisén Region is a pioneer in some land-use planning initiatives and has been shaped by others. This is mainly because nearly half of its surface is designated as a protected area, not to mention the other 35% of state-owned regional land.

Concerning the former, this region served as a "guinea pig" to experiment with a process to manage its coastline with assistance from German technical cooperation. Later, it developed a Land-Use Planning process for the entire region, the first of its kind in the country (Regional Government – SERPLAC Aysén, 2005).

Moreover, this region saw the formation of the first National Tourist Area of Interest in Chile in 2001, centered around General Carrera Lake. During that time, a Regional Biodiversity Strategy was created with the participation of grassroots organizations, designating priority conservation areas.

In 2014, the Multiple-Use Coastal Marine Protected Area of Pitipalena – Añihué was approved, an initiative by the Melimoyu and Añihué foundations, along with the Tic Toc initiative (which did not materialize at that time). Currently, there are two other pioneering initiatives: the Mining Department is working on Chile's first Geopark, identifying sites of geological value, and an agreement between the government and Tompkins Conservation led to the creation of the Patagonian Parks Network. This involves the donation of two new national parks, the extension of another, and the reclassification of three national reserves in the region.

In the marine realm, work is underway on a proposal for a Multiple Use Marine Protected Area in the inner sea and Gulf of Penas in the Tortel commune, involving collaboration between the Tortel municipality, Oceana, and the Ministry of the

Environment (declared in February and published in October 2018).

As you can see, land-use planning goes beyond urban zoning regulations. When we arrived in the region as territorial management pioneers, we initially worked on urban zoning but soon realized the broader spectrum of possibilities. It was not just about creating interurban and intercommunal zoning plans - although there are examples in Aisén - but also about participating in the regional initiatives mentioned earlier, working on the declaration of National Monuments for Caleta Tortel, Isla de los Muertos, and Paso San Carlos (Osorio and Hartmann, 2010). Furthermore, in the study to define the location of new population centers in the Northern Coastal area due to the fishing industry boom and its camps, there were numerous lessons learned. Each of these cases could warrant writing a book, but I will share some details here.

In 1982, during our stay and work in Caleta Tortel, we recognized the significant cultural and historical value of this town. At the time, the government had plans to "relocate the town to Puerto Yungay, considering it to be an artificial settlement." This led us to discover that the National Tourism Service (SERNATUR) had the authority to declare National Tourist Areas, but it had never been applied. We also explored the possibilities offered by the National Monuments Law. As a government official working at the Ministry of Housing and Urbanism (MINVU), we presented this possibility to a minister, but the response was that they were not interested in monuments. This journey took us to the year 2000 when we were implementing a project to prepare the community in front of the construction of a road to Tortel. During this time, we reached out to the Council of National Monuments. With great enthusiasm, they helped us prepare the documentation for a Zona Typica declaration, which was prepared by the architect from the National Civil Service, María Paz Hargreaves. Building on this momentum, we also prepared the documentation for

the Historical Monument declaration for Isla de los Muertos, a cemetery from 1906. We had conducted research on this site in 1982, and more extensive archaeological and historical research was carried out subsequently. This research has helped unveil some of the mysteries of this place and its history, particularly regarding Bajo Pisagua, located nearby. The Zona Typica declaration for Tortel aimed to protect the town from the construction of the road by the Ministry of Public Works and the Civilian Labor Corps (CMT), which could have destroyed the town with its walkways. Similarly, the process of declaring Paso San Carlos as a Historical Monument (Osorio and Hartmann, 2010) aimed to protect it from the threat posed by the HidroAysén project. Paso San Carlos is a rock-cut tunnel located 200 meters above El Saltón on the Baker River. It was constructed by the Boundary Commission in 1902, under the supervision of Engineer Ricardo Michel, representing the first "western" construction in the region.

While we learned valuable lessons from the coastal zoning process – a beautiful project that we worked on for almost a year – we ultimately discovered that the powerful salmon farming companies, in alliance with then-Senator Adolfo Zaldívar, had no qualms about altering it to suit their preferences. They determined that the zoning uses were preferential but not exclusive, essentially turning everything into a caricature. As a result, one can now find numerous salmon farms (some even anaerobic and located outside their concessions) in areas designated as "preferential" for tourism, conservation, and benthic resource extraction. Also in protected areas, including National Parks!

It was during the environmental impact assessment of the HidroAysén project that we would learn another important lesson. Even though we, and sometimes the state, attempt to plan the territory for the common good, businesses also engage in territorial planning to serve their specific interests. They have powerful tools at their disposal, such as the Water Code,

the Electricity Law, the Mining Law, and Decree Law 701 with its forest subsidy. Economic activities often de facto dictate the order of things. It's no coincidence that protected areas are often the remaining pieces of land that no one was interested in at that time, and the Council of National Monuments tends to be cautious about interfering with vested interests (as we experienced in the case of the Paso San Carlos Historical Monument with HidroAysén). De facto planning also occurs when land is contaminated, eroded, and resources destroyed or when pressure is exerted, and lobbying takes place with authorities or by influencing legislators in high places.

In the baseline studies for the environmental impact assessment of HidroAysén, it was evident that the project's area of influence was nearly impossible for them to use due to protected wilderness areas, high-priority conservation zones, national monuments, National Tourist Areas, and other areas prioritized for specific purposes. However, all this zoning and planning was disregarded in the assessment because it lacked legal weight, was non-binding, and even the fact that the project involved building a dam and flooding part of the Laguna San Rafael National Park – a UNESCO Biosphere Reserve – was dismissed by a CONAF Director and their Prosecutor, in contradiction with international agreements.

In the case of the Río Cuervo project by Energía Austral, the geological baseline showed that the entire area was hazardous, and the company attempted to build the dam over a geological fault. However, the company hired other consultants to downplay the danger, and the government changed the reviewers from the National Geology and Mining Service (SERNAGEOMIN) to allow the evaluation to proceed.

Furthermore, we realized that "regional" resources and territory are typically controlled by transnational corporations. HidroAysén (ENEL – Colbún) has a monopoly on water rights in the Baker and Pascua river basins, and Energía Austral controls the Cuervo, Blanco, and Cóndor rivers, effectively blocking

other development initiatives in over 80% of these basins. For the other regional basins, there's insufficient research to determine if a similar situation exists. Due to the protection of these companies' projects with mining concessions, we became aware that a significant portion of the region is under concessions to mining and energy companies, granting them full authority over that land.

Moreover, in the inland waters, theoretically a public national asset, there is a proliferation of concessions for salmon farming, many of which can be used as collateral in the banking system. In numerous cases, these concessions are located in protected areas. This is clearly an appropriation for private business, often by transnational corporations. Additionally, we've encountered the exploitation of the forest by Chinese American transnational corporations and large estates owned by wealthy Belgian capitalists and national millionaires.

Finally, it's worth noting that initiatives for planning and protection, which are led by grassroots organizations, often take decades to materialize and face numerous barriers. In contrast, corporate and state-sponsored initiatives with business interests tend to be much more "efficient." This also holds true for urban use, where aside from witnessing deregulation, we've seen how the Comptroller's Office took nearly three years to acknowledge its mistake regarding the fraudulent modification of the Coyhaique Regulatory Plan, which eliminated a significant number of green areas, and the illegal residential occupation of the remainder, all without taking any action. Even the declaration of risk zones within the Regulatory Plan was deemed inappropriate.

Recently, in the regional workshop "Toward a National Territorial Planning Policy" of the Interministerial Commission on Cities, Housing, and Territory and the Regional Government, the participants prioritized 'Aisén Reserve of Life' as a fundamental principle for any territorial planning policy (El Divisadero, 15/06/2017)

Figure 82

The Baker River delta: you can see the landing strip in the center, the cove of Caleta Tortel upwards, Isla de los Muertos to the right, and Bajo Pisagua to the right.

Figure 83

Isla de los Muertos, 1906 cemetery.

10 EL DIVISADERO, SABADO 15 DE JULIO DE 2017 REGIONAL REGION DE AYSEN

Priorizan "Aysén Reserva de Vida" como tema fundamental de toda política de ordenamiento territorial

Coyhaique-. "Aysén Reserva de Vida" (ARV) como el principal componente que debe tener toda política de ordenamiento territorial que se lleve adelante en la región fue uno de los resultados del taller regional "Hacia una Política Nacional de Ordenamiento Territorial (PNOT)," que se realizó recientemente en Coyhaique.

La actividad, impulsada por el Gobierno Regional de Aysén y la Comisión Interministerial de Ciudad Vivienda y Territorio, fue la primera de este tipo que se realizó en la región desde que hace algunos meses se inicuara este trabajo. Dentro de los principios rectores de la PNOT se incluyen sustentabilidad, diversidad territorial, equidad territorial, integralidad, desarrollo y competitividad territorial, participación y descentralización.

Fue en el trabajo en grupo que los asistentes priorizaron los temas y/o problemas regionales que deberían considerarse al momento de pensar la política desde Aysén.

"Nosotros planteamos que es necesario considerar la propuesta de ARV, pensando en que se debe contemplar lo que hemos avanzado en definiciones de lo que significa, iniciativas concretas que se han desarrollado como productos locales, decisiones democráticas sobre recursos naturales, en

con territorios 'legalmente' secos, una Ley Minera que está por sobre muchas otras normativas, una Ley Eléctrica que incluso pasa por encima de los planes reguladores. Asimismo, se planteó la necesidad de avanzar en autonomía en las decisiones ciudadanas y políticas.

"Si como región hemos sido los pioneros en ordenamiento territorial, debemos ser los pioneros en aplicar esta política, ya que esta tiene un carácter de urgente, estando atrasadísimos en la planificación," señaló en la ocasión la directora de la Corpo-

ARV en primera prioridad

Fue al momento de votar las distintas ideas que la visión relacionada con Aysén Reserva de Vida obtuvo la mayor aceptación.

Durante el taller, se informó que, según los plazos, la PNOT debiera estar lista a fines de 2018. Y la posibilidad que los planes de ordenamiento territorial sean vinculantes se encuentra en comisión mixta en el Congreso Nacional, en el marco de la Ley de Fortalecimiento de la Regionalización (conocida también como de traspaso de competencias).

Figure 84

Article in the El Divisadero Newspaper, June 15th, 2017.

Figure 85

Historic Monument Paso San Carlos del Baker.

Patagonia: World Heritage Site

In 2001, leaders from PeaceBoat, the National Committee for the Defense of Fauna and Flora, and the Presidents of the Senate and Chamber of Deputies' Committees on the Environment, Natural Resources, and National Property launched the proposal "Patagonia Heritage of Humanity." Its objective was to enhance, conserve, and valorize the exceptional qualities of this territory, considered one of the few remaining pristine areas on the planet.

This initiative, later endorsed enthusiastically by the Council and Regional Government of Aysén and the entire local community, as well as the Senate, was considered by the National Monuments Council. This institution requested the National Forestry Corporation to prepare a technical dossier for a World Natural Heritage site proposal, the first of its kind in the country, to be presented to UNESCO. Subsequently, this initiative also received support from thousands of citizens, various national and international organizations, the Third Meeting "Science, Culture, and Tourism of Aysén," organized by the Center for Ecosystem Research of Patagonia (CIEP), and Minister of the Environment Ana Lya Uriarte. She understood perfectly, as did Minister Badenier, with whom we also conversed years later, that achieving the designation of the first World Natural Heritage site was a unique opportunity to demonstrate to the world our commitment to safeguarding the third-largest area of ice surfaces on the planet, which is in rapid retreat, sending a clear signal in the face of climate change and global warming and working for the protection of the national and global environment in the year of the country's bicentenary.

For a site to be considered a World Heritage Site, it must possess "outstanding universal value." Cultural Heritage includes monuments and architectural complexes, sculptures, paintings, archaeological elements or structures, places of historical significance for art or science, places or works jointly created by humans and nature, and archaeological sites of exceptional historical, aesthetic, ethnological, or anthropological value. Natural Heritage includes monuments and places with exceptional aesthetic, conservation, scientific, or natural aesthetic value, as well as geological and physiographical formations and habitats of threatened species.

The declaration of a place or territory (site) as a World Heritage or Humanity is a complex process that involves a commitment from the nominating state. The body responsible for sanctioning the declaration is the World Heritage Committee, a part of UNESCO.

Being declared a World Heritage Site is, above all, a commitment and responsibility to the global community. It is also an honor, facilitates conservation efforts, and undoubtedly adds international prestige and reputation. For remote and lesser-known places like Patagonia, being listed alongside iconic sites like the Pyramids of Egypt or the Parthenon culturally, and Yellowstone, Serengeti, Galápagos Islands, Iguazú Falls, or Sagarmatha (Everest) naturally, is of great importance.

Chile had three cultural sites declared as World Heritage: Easter Island, the Churches of Chiloé, and the historic quarter of Valparaíso, to which were later added the Sewell Mining Town and the Humberstone and Santa Laura Saltpeter Works. In Argentine Patagonia, there were two natural sites declared: Los Glaciares and Península Valdez, and one cultural site, the Cueva de las Manos in Río Pinturas.

The dossier prepared by CONAF for the "Ice and Patagonian Archipelagos Site," which includes the territory of Torres del Paine, Bernardo O'Higgins, and Laguna San Rafael National Parks, as well as the Alacalufes, Katalalixar National Reserves, and part of Las Guaitecas, was submitted to the Ministry of Foreign Affairs in January 2007 for presentation to UNESCO.

The dossier clearly expressed how important international recognition of this vast national territory would be to us. Among other reasons, it emphasized the mysteries that this territory holds for science and the challenge it presents for exploration and conservation. This territory encompasses magnificent landscapes and offers adventure opportunities for world-class tourism. It represents a unique and globally relevant natural example of temperate rainforest and peatlands, constituting the third-largest ice-covered area on the planet, along with a virtually unknown and unique inland sea ecosystem.

The declaration would also enhance the existing Biosphere Reserves, National Monuments, and Kaweskar remains in the area.

After the dossier was submitted in 2007, we managed to find out through the Transparency Law that the Ministry of Foreign Affairs had made some observations that were never addressed by CONAF. In any case, if the issue were the pending definition of international boundaries with Argentina in the Southern Patagonian Ice Field, it's worth noting that the Argentine side was declared a World Heritage Site in 1981 (they are more efficient in these matters).

Later, we learned that the Executive Director of CONAF, Catalina Bau A., and the Ministry of Agriculture, for reasons unknown to the other stakeholders, decided to reduce the site to the well-known and overcrowded Torres del Paine National Park (which is already a Biosphere Reserve).

We weren't able to make progress in the following government cycle, and in the current one (President Bachelet), we have only managed to obtain the support of the Directorate of Libraries, Archives, and Museums (DIBAM) and a promise from the Executive Director of CONAF to address the issue, after years of requests.

Finally, thanks to the Patagonian Parks Network agreement, which includes the reclassification of the Alacalufes National Reserve as a National Park, we learned who managed to sabotage this initiative: the Ministry of the Economy, working for salmon companies, who have dozens of concession requests in this protected national area.

Figure 86

Poster from the "Patagonia World Heritage Site" advertisement campaign, CODEFF, 2010.

Patagonia Reserve of Life

We present below an excerpt from a draft proposal for an exception law for Patagonia that we presented to the government when the issue of exceptional zones appeared in its program (Coyhaique, September 12, 2013):

Considerando:

- The exceptional environmental, natural, social, and cultural qualities of Patagonia.
- Its still-significant pristine or natural condition and large area of protected and state-owned lands.
- Constitutional rights, including the right to live in an environment free from pollution and the state's duty to ensure that this right is not affected and to protect the preservation of nature. The law may establish specific restrictions on the exercise of certain rights or freedoms to protect the environment.
- Environmental fragility, recent colonization, isolation.
- Lessons learned from the mistakes made with destructive and unsustainable initiatives.
- The debt of the Chilean state, who is responsible for these mistakes, to Patagonia.
- The human right to be.
- That there is still an opportunity to conserve and utilize the qualities of Patagonia and the possibility of sustainable development.
- That this territory should not bear the burden of being extreme, isolated, and at the fringes of the country without reaping the benefits that these conditions can generate.

We express:

- The need for a "Patagonia Law" that maintains the exceptional qualities of this territory, allowing these qualities to be valued rather than destroyed, serving as a model for regionalization, and allowing greater self-sufficiency and autonomy in its condition of isolation and extremism. It should make the region a model of sustainable development.
- Development on a human scale, inclusive of the territory's inhabitants, society, and culture, for and by its inhabitants, which values "being" over "having" and aims to improve quality of life, personal development, and happiness.
- To achieve these objectives, improve internal communications and connectivity, enhance and regionalize educational, health, energy, and minimum wage standards, encourage the local economy with added value and consumption of regional products, assert sovereignty over natural and cultural resources, utilize the existing opportunity for organic and non-genetically modified production, and promote democratization through increased citizen participation, citizen consultations, and participatory territorial planning.
- This also implies a present and participating state.

[Finally, the Environmental Court issued its ruling in January 2018, annulling the Resolution of the Committee of Ministers of two years earlier, on the grounds that the compensatory measures for the loss of forests and wetlands were insufficient. The work of the Environmental Prosecutor's Office, FIMA, which represented us, was important in this victory.]

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CHAPTER 6

THE DEFENSE OF AISÉN RESERVE OF LIFE

The 'Aisén Reserve of Life' initiative and the demonstration of its feasibility have taken us a lot of time and effort. We must admit that defending this proposal has taken us years and that waging enormous campaigns against the largest mega-projects in Chile has worn us down. Furthermore, considering that we managed to stop the country's most million-dollar and powerful mega-projects with sometimes limited resources and less than $10,000 of funding a year, our victories seem unbelievable. These victories often occur almost miraculously, when we least expect them, and we interpret them as "Patagonia defending itself," or as though Mother Earth or God were giving us a hand. They have also helped the inhabitants of Aisén realize their values and react to the risk of losing them, as well as gain national and international attention, solidarity, and recognition for our proposal and for Chilean Patagonia.

Without our initiative, these campaigns could not have had a positive influence on 'Aisén Reserve of Life,' instead of the usual "no" and "opposition to development and progress" that groups who oppose invasive transnational mega-projects often receive. So much so that at some point, some managers shielded themselves by claiming that our position was ideological.

As for the Nuclear Waste Dump, when we first arrived in the region, we boasted about living in a pollution-free area when traveling to mainland Chile, but some would tell us, "there's the hole in the ozone layer." Shortly after, we learned about the "nuclear waste dump" project in Gastre, Chubut, Argentina, about 400 km from Coyhaique. It was the time of the rise of the European "greens" in response to nuclear power plants, as well as protests against nuclear tests in Mururoa. The opposition in the Argentine Patagonian neighborhood was absolute, with almost all municipalities declaring themselves "Nuclear-Free."

On our part, we contributed to the internationalization of this opposition and declared our own municipality as "Nuclear-Free and without Hazardous Waste." This campaign spanned several years and marked the beginning of our work in radio with those who would later become members of the "green caucus" in the parliament, L. Sánchez and A. Horvath, turning us into nuclear experts. The campaign ended in 1996, after a protest in Futaleufú with the presence of the Chamber of Deputies' Environment Committee. Since then, we never heard about that repository again. However, in 2017, Argentina signed an agreement with China to build a nuclear power plant on the border of Río Negro with Chubut, facing the Valdés Peninsula, a Natural World Heritage site. The opposition to this is, of course, total.

Figure 87

Demonstration in Futaleufú, 1996.

The Alyumsa Mega-Project

The Alumysa mega-project aimed to build an aluminum refinery in the Aisén Fjord area, powered by hydroelectric dams. Our campaign against it lasted for fourteen years, with intermittent phases of reemergence.

In 1990, we took a stand on this issue by publishing statements in the regional press and even in El Mercurio – an unusual occurrence – after investigations with Australian NGOs specializing in aluminum production issues and the International Rivers Network, an NGO with expertise in dam-related hydroelectric problems.

In 2001, when Alumysa IV resurfaced, we formed the Citizen Committee for Aisén Life Reserve (a regional group consisting of unions, social and environmental NGOs, and artistic-cultural groups). Later, we established the Aisén Life Reserve Alliance (a national coalition of 18 environmental NGOs). We also gained valuable support from organizations like Mining Watch, Greenpeace, and the Halifax Initiative in Canada, as well as American Land Alliance, Natural Resources Defense Council (NRDC), Forest Ethics, International Rivers Network, the Latin American Coalition Ríos Vivos, and AIDA in the USA.

Thanks to this global solidarity, we had the opportunity to visit Canada four times for discussions with unions, organizations, and congressmen. We also participated in the Noranda shareholders' meeting, preparatory meetings for the Convention on Biodiversity, a forest congress, and a strategic planning meeting. We traveled to the USA twice for River Rallies and attended anti-dam and aluminum conferences in Brazil and Argentina. Additionally, we participated in the 2nd World Meeting of Dam-Affected People and their Allies in Thailand. One of the most visible expressions of this global solidarity was the visit of Cameron Diaz and the Greenpeace ship Arctic Sun to the region, as well as the Italian-Spanish film "Green Heart" by Sepúlveda and Meza.

Some of the most significant regional achievements in our work included submitting over a thousand observations to the Environmental Impact Assessment of Alumysa and organizing the "For the Dignity of

Aisén" march. This because, Minister Rodríguez Grossi, who supported the project and represented a centralized national perspective, stated: "What's the point of having the least polluted area in the world if there's no one in it? Why would I want the country or Aisén to be a nature sanctuary if we'll never be able to enjoy it? Why would I want an empty place in order to maintain a specific kind of nature?"

In this campaign, we managed to involve the Medical Association, fishermen, the Agricultural and Livestock Federation, two tourism chambers, and the Salmon and Trout Producers Association in defending their resources and economic interests. In fact, it was the influential salmon farmers who persuaded Senator A. Zaldívar to change his position, leading President Ricardo Lagos to suggest relocating the initiative in August 2003 in Puerto Chacabuco. As a result, Noranda withdrew its project from the Environmental Impact Assessment system, claiming that the rules had changed. In March 2006, Noranda announced its decision to abandon the project and was absorbed by Falconbridge, which soon became part of the mining company Xstrata. This mining company, inheriting the water rights, lands, and preliminary projects, reappeared through its subsidiary Energía Austral in 2007, this time with a dam-based hydroelectric power project on the Cuervo River (Xstrata was absorbed by Glencore).

Below is the most important document prepared for this campaign (which was translated into English), containing a wide range of information that took considerable effort and years to obtain and process. This information was of crucial importance to the campaign, as it is always essential to know what and who we are up against, especially in remote and unfamiliar places.

1. HISTORY

1.1 Alumysa I

The Alumysa project was conceived in the late 1980s by Proyectos de Aisén, a part of the Walker group, as a labor-absorbing project for the construction of the Meullín Hydroelectric Power Plant, with a 36-month timeline. To facilitate this, in February 1990 (D.S. 119), the Ministry of National Assets conditionally sold them 16,125 hectares for $40,312,000 (at a rate of $2,499.9 per hectare). Non-compliance with the contract would entail contract termination, compensation, a mortgage, and guarantees in favor of the government.

In July 1990, Ignacio Walker Concha, President of Proyectos de Aisén, announced in Santiago that the construction of a large hydroelectric power plant in the Aisén Fjord and an aluminum refinery with an annual production of 220,000 tons would begin the following year. In order to do this, he signed an agreement with a Brazilian company, a Japanese company, and three American companies.

1.2 Alumysa II

In March 1991, Proyectos de Aisén and Noranda Aluminum, along with the Minister of Mining, Juan Hamilton, announced that they would develop the Alumysa project over the next 5 to 6 years.

En octubre de 1992, sin que Proyectos de Aisén haya cuIn October 1992, due to Proyectos de Aisén's failure to fulfill the contract with the Chilean government, the contract was terminated by means of D.S. 411, and D.S. 119 of 1990 was modified to lift all restrictions. This was done to enable the proponent to secure international financing for the Alumysa project, which included a more powerful hydroelectric plant and an aluminum reduction plant.

In January 1994, the Ministry of National Assets proceeded with the direct sale of an additional 7,447.73 hectares at a price of UF 9,233.57 (approximately $20,000 per hectare) for the project, based on a Proyectos de Aisén plan.

In January 1995, Proyectos de Aisén S.A. sold 16,125 hectares acquired from the government for $153,277,925, 1,234.1 hectares acquired from individuals and through auctions for $281,623,279, water rights on the Cuervo River for 110 m3/second eventual flow for $60,000, and the "Alumysa" trademark for $40,000 to Proyecto Alumysa Ltda. The latter company was based in Santiago, and its capital was owned by Soc. Alumysa Joint Venture Limited and Noranda Holdings Limited, domiciled in Georgetown, Cayman Islands.

In March 1995, the company Proyecto Alumysa Ltd. announced that it would subject its project to the Environmental Impact Assessment System. The project included a 360 MW hydroelectric plant on the Cuervo River, an aluminum plant located 3 km from Puerto Aisén, and a port in Bahía Acantilada. However, in October of the same year, Noranda announced from Canada that the project was suspended.

1.3 Alumysa III

In July 1996, it was announced that COMALCO, an Australian aluminum company, would negotiate their participation in the Alumysa project, which now required 2,500 USD in 3 hydroelectric dams and an aluminum plant with annual 430,000 tons capacity. In December, COMALCO withdrew from the project and Noranda announced that they would conduct new feasibility research, implying that there would be changes in the project.

Extracted from Alumysa Report and Clippings, CODEFF Aisén, 1995-96.

2. CURRENT EVENTS

2.1 Alumysa IV

On August 31, 2001, Noranda submitted the Alumysa project to the Environmental Impact Assessment System (EIA) with a 24-volume report, and the summary was published on September 7th. From that date, there were 60 days for public participation.

This mega-project, which would represent the largest foreign investment in the history of Chile at US$2.75 billion, was located in and directly affected the municipalities of Aisén and Coyhaique, and indirectly impacted the XI Region of Aisén, self-declared as a "Reserve of Life."

The Alumysa mega-project involves the reduction of aluminum from alumina sourced from Australia, Jamaica, or Brazil, utilizing existing hydroelectric resources. The market for the aluminum would be both national and international. To make this a reality, it is necessary to build:

Three hydroelectric dams in the Cuervo, Cóndor and Blanco Rivers:

- **Cuervo:** 434 MW, 2 dams of 66 and 71 meters high, flooding 5,820 hectares (14,381 acres) with the water being returned to Aisén's estuary, leaving the river practically without flow. The active volcanoes Maca and Cai are located in its basin.
- **Cóndor:** 44 MW, 3 dams 45, 30, and 15 meters high, flooding 226 hectares (558 acres).
- **Blanco:** 280 MW, 1 dam 116 meters high, flooding 3,552 hectares (8,777 acres) of settled valley and raising the water level of Caro Lake by 13 meters. The active volcano Hudson is located in this basin.

  79.2 km of 220kV transmission lines with 40-meter high

towers. 10.8 kilometers of these are parallel lines, running from the hydroelectric plants to the reduction plant with 50-meter wide easements.

95 kilometers of access roads to the hydroelectric plants and the reduction plant.

A port on the southwest coast of Chacabuco Bay with a docking platform of 185 meters long and 40 meters wide, allowing simultaneous docking of up to 116 ships weighing up to 45,000 deadweight tons and 20,000 tons.

A loading point and floating dock to the west of the mouth of the Cuervo River.

A reduction plant located between Chacabuco and Candelaria Bays, capable of producing approximately 440,000 tons per year in ingots. The production requires the import of about 846,000 tons of alumina, 146,000 tons of calcined coke, and 43,500 tons of tar. Other raw materials include aluminum fluoride, diesel #2, and liquefied gas.

Extracted from the Executive Summary Environmental Impact Study Alumysa Project – Noranda, CH2M HILL, August 2001.

2.2 Some predictable problems with the mega-project

Aisén is the most fragile region of Chile in every aspect due to its recent and complex geobiological, cultural-demographic, and socio-economic formation. It is also one of the regions with the highest environmental values, the most pristine, and boasts some of the best water and air quality on the planet. All of these factors have led to the region being declared a "Reserve of Life,"

aiming for sustainable development that values its virtues instead of destroying them.

The Alumysa project, even just considering its size and image, is not compatible with these goals. Its managers warned as early as 1991 that it would "violently change the region."

Environmental concerns

Dams and reservoir facilities

- 9,598 hectares (23,717 acres) are flooded, including landscapes of high value, and serving as habitat for numerous species (including fish). Among them 12 are vulnerable, 3 rare, 3 not sufficiently known, and 5 endangered species (according to the environmental impact baseline). In Blanco River and Caro Lake, it affects the endangered Huemul and Colo Colo Cat. Significant areas of vegetation, forests, and fields are lost.
- Aquatic life is disrupted and extinguished, including at least 6 vulnerable species and 1 endangered species.
- Water quality is altered, reducing oxygen and nutrients reaching the estuary, thereby affecting life and fishing within it.
- The temperature of the impounded water rises, impacting marine life and potentially influencing "red tide" occurrences (harmful alga bloom).
- Flooded vegetation rots, altering water quality and emitting methane and carbon dioxide into the atmosphere (greenhouse effect).

The works in the basin, the decrease in flow, and the violent flooding from the dam, would end up destroying it, which would mean, amongst other impacts, erosion.

- Fishing downstream of the dams is affected.
- Erosion in watercourses and degradation of the delta, with discharges during periods of high demand and retention

of sediments in the reservoir.
- Changes in water and soil salinity.
- Contamination with methylmercury and other heavy and toxic metals in the water, produced by bacteria through anaerobic decomposition. Heavy metals are absorbed and concentrated in the food chain (affecting those who consume them).
- Fish migration is impeded by dams.
- Risks of flooding in Puerto Aisén with discharges from the excess of the Blanco River reservoir.
- Extensive rock and gravel borrowings for dam construction destroy hills, rivers, landscapes, cause erosion, and disrupt wildlife.
- Noise during construction.
- Risk of dam collapse if constructed on permeable rock, or due to pressure from accumulated sediments or volcanic activity (the Cuervo River basin is home to the active Maca and Cai volcanoes, and the Hudson volcano is in the Blanco River basin). Downstream from the Blanco River dam is Puerto Aisén.
- Relocation and loss of land for settlers in the Blanco River valley and along the shores of Lake Caro, approximately 40 families
- The fluctuation of the reservoir water level (41 m in Yultón - Meullín, 5 m in Cóndor, and 48 m in Río Blanco) affects recreational use, the landscape, and causes landslides by eroding the base of mountain slopes.

High-voltage power transmission lines:

- Landscape destruction in areas of high value and/or tourist traffic.
- Electromagnetism affecting living beings.
- Erosion of cleared band areas and loss of habitat.
- Dangerous to birds and aircrafts.

Roads:

- Disrupt the pristine landscape and facilitate the arrival of pest vectors.
- Cause erosion.
- Transporting hazardous or toxic elements carries the risk of pollution.
- Shore pollution.
- Disruption and fragmentation of wildlife habitats.
- Wildlife run-over risk.
- Disturbing noise.

Ports:

- Loading and unloading cause water pollution.
- Ballast water leads to biological pollution with exotic species and/or poor-quality water.
- Detonations or impacts in the water affect fauna.
- Water pollution due to lubricants and solid waste.
- Facilitates the arrival of pest vectors.
- High risk of catastrophes in the traffic of ships carrying dangerous cargo due to the complicated route through channels and fjords.

Reduction Plan:

- Emission of fluorinated gases, polycyclic aromatic hydrocarbons, sulfur dioxide, and others contribute to the greenhouse effect and climate change, destroying vegetation and wildlife habitat, inhibiting their growth, accumulating in the food chain, causing severe bone fluorosis or osteoporosis in fauna and humans. Acid rain.
- Over 600,000 tons/year of waste are produced, along with 758 MW of energy transformed into heat and electromagnetism.
- Solid waste reacts with water, producing heat (fires), toxic ammonia and acetylene gas.

- The solid waste produced contains or can leach fluoride, cyanide, ethylene, polynuclear aromatic hydrocarbons, arsenic, volatile organic compounds (VOCs) including trichloroethylene (TCE), asbestos, and other metals and sodium. If they reach water systems or the estuary, they could cause a catastrophe. Addressing issues with these landfills has cost the U.S. environmental agency hundreds of millions of dollars.
- The size of the facilities is over 1 km by 500 m and 15 m in height, impacting the landscape.
- Electromagnetism and other working conditions are risky and unhealthy.
- Waters returned to the estuary may contain pollutants and higher temperatures. Fluoride discharges are harmful to aquatic life.
- Hydrogen fluoride from the electrolytic process is highly corrosive; it causes amputations, skin problems, allergies, and destroys histamine control leading to chronic fever. There is a risk and exposure to fatal electrocution.
- Ingestion of aluminum (dust from the process) causes cystic fibrosis, gastrointestinal disorders, senility, and Alzheimer's disease. Additionally, there are sublethal health problems that are difficult to diagnose.
- Risk of fatal explosions when molten aluminum comes into contact with water.
- There is not enough study on ecological damages, but it is known that they are significant and cumulative over time.
- Fluoride concentrations of 1 ppm can cause serious damage to vegetation and threaten livestock and milk. Some pastures accumulate 200,000 times the level of fluoride in the air. According to the U.S. Department of Agriculture, fluoride has caused more harm to livestock

than any other type of air pollution. Fluoride has been found in vegetation up to 30 km downwind from a plant with 98% gas recycling in Montana, USA.
- Fluoride can turn into fluoracetates or other combinations, even more toxic. High doses of fluoride are toxic, and the ingestion of 5 to 10 grams is lethal.

Sociocultural and Economic Impacts:

- A floating population of up to 8,000 solo men in construction contributes to an increase in prostitution, sexually transmitted diseases, HIV/AIDS, alcoholism, criminality, drug addiction, and other social pathologies.
- Attraction of unemployed individuals seeking work with potentially worse effects than the aforementioned.
- Unemployment upon completion of construction projects, with its associated effects.
- Saturation of infrastructure, service facilities, and the housing market.
- The public sector and local authorities exceed their capacity for management, decision-making, and problem-solving.
- Regional cultural destruction, a shift in values – definitive imposition of the consumerist model.
- Creation of a mining enclave, not sustainable, extremely dependent; high risk of unemployment (raw materials deplete, reservoir becomes saturated). The plant has a lifespan of 50 years.
- The activity and its consequences will divert regional investment to the detriment of other activities and issues in other places.
- Inflation, scarcity, market saturation.
- Concentration of power.

- Benefits directed to groups different from those bearing the social and environmental costs. Results are not equitable. Questionable efficiency and profitability as social and environmental costs are not incorporated into the project.
- Gratuitous use of national resources, acquisition of state property at low prices, state subsidy with franchises.
- Tax evasion by bringing in capital and using D.L. 600 franchises. Use of franchises and subsidies intended for extreme areas.
- Scale – the megaproject is of an unmanageable scale for the region.
- There are numerous experiences of negative effects from megaprojects.
- The investment is directed towards technology rather than people, and a significant portion of it will be made abroad.
- Urban expansion in Puerto Aisén is extremely complex and costly.
- Affects other economic sectors (tourism, aquaculture, fishing, livestock).
- Inadequate citizen participation, transparency, and information.
- Corruption: opportunities for personal enrichment are greater than in smaller and more diffuse alternatives.
- Subjective evaluation of technical, financial, or economic criteria, even more regarding social and environmental ones.
- Lack of clarity on financial risks and the risks involuntarily assumed by those affected.

The lack of monitoring of impacts, the absence of subsequent assessments, and the appropriate control of performance are common. Thus, the environmental impact assessment becomes just another bureaucratic formality.

According to Australian experts, no cost-benefit study can justify an aluminum smelter; the social, environmental, and economic costs will always outweigh the economic benefits.

In 1973, residents of Okinawa in Japan vetoed an aluminum plant, which was then relocated to Indonesia. With this move, Japan shifted 90% of its annual production of 1,000,000 tons abroad.

Extracted from the Alumysa Report, CODEFF Aisén, 1995, Final Report of the World Commission on Dams, 2000, and The Relationship between Primary Aluminum Production and the Installation of Mega Hydroelectric Power Plants in the World's Rivers, J. Gitlitz - IRN, 1993.
CODEFF Aisén, Alumysa Report, September 2001.

3. WHO IS NORANDA?

Noranda Inc. is a corporation headquartered in Toronto, Ontario, Canada. It is one of the largest diversified natural resource companies in the world. Its businesses span mining, metals, forest products, oil, and gas. Noranda is the leading mining company in Canada, the fifth-largest forest products producer, and one of the major energy groups.

Noranda has been involved in Chile in the Collahuasi mining megaproject since 1976 (condemned in Canada for its support of the military regime) and Refimet since 1995.

Noranda's environmental record is extensive. There are documented records of at least 87 intentional violations in Canada, resulting in fines reaching 1.2 million dollars. Violations include spills and discharges of toxic substances, insufficient record-keeping, deficiencies in the storage of hazardous waste, toxic air emissions, exceeding permitted levels, negligence-related accidents, contamination of coastal waters and fisheries, failures in the installation of cleaning and anti-pollution equipment, and the failure to report incidents or polluting accidents to the authorities.

According to the Council on Economic Priorities of New York, Noranda emitted 476,372.34 kg of toxic chemicals into the environment in 1990. In the United States, it has had to pay over 1.9 million dollars in fines for pollution and violations of human health. This includes a fine of $75,000 for air pollution from its only aluminum smelter in New Madrid, Missouri.

In 1995, U.S. President W. Clinton vetoed a mining project by Noranda near Yellowstone National Park due to the associated risks.

Extracted from the Alumysa Report, CODEFF Aisén, 1995.

Figure 88

Press conference with the "Green Party" and Sara Larraín in the 90s, in San Francisco Church, Santiago.

Figure 89

March for the Identity of Aisén, Coyhaique, 2001.

Figure 90

Submission of observations to the EIA of Alumysa with leaders of the Citizen Committee for ARV, Coyhaique, November 2001.

Figure 91

Questioning President Lagos in front of Cooperativa Radio Station.

Figure 92

Cartoon by Nelson Huenchuñir in the Aysen's Newspaper: P. Hartmann attempting to uphold the Alumysa environmental impact study.

Figure 93

Caricature by Nelson Huenchuñir in Aysen's Newspaper: The minister who declared us "nobodies".

Figure 94

Filming 'Green Heart' with Luis Sepúlveda and Diego Meza at the mouth of the Cuervo River, 2002.del Río Cuervo, 2002.

Figure 95

Greenpeace's Artic Sun in Puerto Chacabuco. Demonstration against Alumysa, 2004.

Figure 96

Meeting with the Environmental Commission of Deputies, Canada, 2003.

Figure 97

P.H.S. at the Noranda shareholders' meeting in Toronto, Canada, 2003.

Figure 98

Participants in the Rivers Alive Congress, Goiania, Brazil, 2002.

Figure 99

Actress Cameron Diaz's support in Aisén, February 2004.

Figure 100

Actress Cameron Diaz's support in Aisén, February 2004.

The fishing boom and the American Monarch

Already in the '80s, we were the first to denounce the invasion of the Aisén Sea by foreign factory ships, and later, the first to denounce, with technical evidence in hand, the overexploitation of the 'fishing boom' that collapsed practically all regional fisheries in a few years, leading to a tremendous social disaster.

However, shortly thereafter, there was the intention of the 'American Monarch' to operate in the Aisén Sea. This mega-trawler, a factory vessel from the largest Norwegian company in the industry, intended to operate in the Southern Sea, which was prevented through a campaign that also involved Ecoceanos, Greenpeace, and Friosur, the latter feeling threatened in 'its resource.' The Supreme Court prevented its entry into Chile in 1997.

Figure 101

Speakers at the 'Waters of Aisén' seminar in Coyhaique, 2004.

Figure 102

Inner Sea of Aisén.

Patagonia Without Dams

Patagonia Without Dams has been the largest environmental campaign ever conducted in Chile. It arose due to Endesa's announcement in August 2005 of a megaproject involving four dams on the Baker and Pascua rivers, along with a run-of-the-river power station on the Del Salto River. Subsequently, Endesa partnered with Colbún to form HidroAysén, and in August 2008, they submitted an Environmental Impact Study - comprising 10,500 pages in 39 volumes - for their 14 assessable projects, which now include five dams.

On our part, we observed how Endesa was conducting studies in the southern part of Aisén, and we were already working on the water issue, so they didn't catch us off guard. Additionally, we now had experience and knowledge of the subject. Thus, as soon as the project became public, we issued a public statement opposing it. On another front, in late 2005, the organizations that had been working for 'Aisén Reserve of Life' organized a series of workshops 'For Chile and Aisén..., Let's Learn about Energy,' in which Endesa even made a presentation. In January 2006, we issued a public statement (see below) taking a stance and forming the Citizen Coalition for Aisén Reserve of Life. It seems incredible, but in March of that year, we already had our first demonstration at the Baker-Nef Confluence.

Later on, national organizations joined the campaign, such as Ecosistemas, which had also been working on the water issue. In 2007, the Patagonian Defense Council (Consejo de Defensa de la Patagonia, CDP) was formed, which also included international organizations such as International Rivers, Natural Resources Defense Council, and Greenpeace. The CDP had about 80 members. Additionally, other organizations that, for one reason or another, were not part of the CDP participated in the Patagonia Without Dams campaign, including various tourism chambers, the Jóvenes Tehuelches, and some other local groups.

PUBLIC STATEMENT

The undersigned organizations, after conducting the workshop series of the project 'For Chile and Aysén... Let's Learn About Energy' regarding the global impacts that the potential construction of four mega hydroelectric power plants by Endesa in the Baker and Pascua rivers in the Aysén Region of Patagonia will generate, hereby deliver the following public statement to the public:

- We have confirmed – and therefore emphasize – once again **the importance of citizen participation, particularly the joint and coordinated work** to progress in the processes of information and decision-making by the citizenry, both individually and collectively.
- The mentioned workshops not only allowed access to new knowledge and experiences but also facilitated the exchange of information among participants, providing a real and concrete space to form other alliances that are now fully operational. For this reason, we will continue this joint effort regarding the better understanding of Endesa's project and its impacts.
- We will form a **citizen coalition** that allows the exchange of experiences and knowledge and creates spaces for the necessary social mobilization. The idea of this coalition is to join all the efforts that are already underway, without claiming any representation beyond the participating organizations and citizens today and in the future.

Regarding the project presented by Endesa and after accessing a large amount of information (from various and varied sources), we have decided to approach this initiative with a critical view because:

a. Regarding the form: We consider that, **despite the expressed willingness to carry out transparent work, Endesa has not fulfilled this premise** since many of its decisions have had to be known to the public through other sources. A specific case is the publication of a notice in the La Nación newspaper on Monday, December 12, where 6 dam sectors on the Baker River and 5 on the Pascua River are established, plus one on the Del Salto River (for the development of the project itself), which was never informed during the workshops to which the company attended to present on more than one occasion. This generates mistrust regarding its willingness, which does not align with the disposition that the signing organizations have had with its representatives.

b. We also believe that the strong lobbying initiated by Endesa to claim that its project is a national necessity (and not specifically for mining companies, as has been proven) and the modification of its discourse according to circumstances (not clarifying the information when a minister stated that the power plants would be run-of-river when the company always considered dam and reservoir projects) makes us think of an **utilitarian perspective**, which is not consistent with the ethical vision of the signing organizations. Proof of this is the free and non-discriminatory sharing of important information that has been done. We do not believe that for strategic or tactical purposes, values such as transparency, honesty, and the common higher interest should be violated.

c. As for the substance: We have come to the conclusion that this megaproject (we have decided to use the prefix 'mega' given the population, cultural, and territorial reality of this region) **is not consistent with the sustainable development of the Aysén Region and Patagonia, nor with the future vision**

posed by a significant part of its population through various participatory processes, from the formal declaration of Aysén as a Reserve of Life to the spirit of the Regional Development Strategy.

d. Moreover, we believe that intervening on the scale proposed in the most important rivers (in terms of flow, biodiversity, and tourism potential) of the Aysén Region and Chile will not only be a **true assassination of these waterways** but also **a threat to all forms of life in these basins. It also goes against the living conditions and the vision that those of us who inhabit this land have regarding the comprehensive development, present and future, for our communities**—both environmentally and culturally, socially, and economically. Megaprojects that drastically impact communities undermine positive evolution, as they are imposed rather than being consistent and gradual, as is any real development on a human scale.

- In national terms, we agree that Chile currently has significant needs, primarily affecting those who have not achieved a quality of life consistent with the development the country boasts about. However, **this is not due, as has been suggested, to a supposed low growth and limited use of our natural resources.** On the contrary, high growth and the overexploitation of environmental capital, as seen in the case of Chile, irreversibly affecting forests, basins, marine resources, and mining, have not ensured the reversal of this situation.
- We believe that **a policy of wealth redistribution, increased social protection for the most vulnerable sectors, the strengthening of collective responsibility over individual profit, the widespread adoption of small-scale alternative renewable energy generation, energy efficiency, and a**

proper and rational management of our natural resources for the common good rather than benefiting some over others, are some of the real and future-oriented measures that should be taken. We want the development of Aysén, Chile, and the world, but not one based on a logic that marginalizes the vast majority, primarily benefiting a few based on speculation and private interests.

- Finally, we reaffirm that each of the undersigned organizations **will establish mechanisms to carry out the decision made, which will also translate into joint actions**. This is not contrary to the ongoing dialogue with the various involved parties because we believe in the continuous generation of knowledge and learning based on principles such as transparency, honesty, the genuine pursuit of the common good over individual interests, non-violence, and respect for others even when they have a different view than our own.
- We invite all individuals and organizations that share the statements outlined here to work together to make this vision of society a reality.

Miriam Chible Contreras, President of the Private Corporation for the Development of Aysén. Peter Hartmann Samhaber, Regional Director of the National Committee for the Defense of Fauna and Flora. Alejandro del Pino Larzet, President of the Costa Carrera Corporation. Francisco Vio Giacaman, Director of the Patagonia Guides School (Drafted by Patricio Segura O.).

Figure 103

First demonstration in the Baker, March 2006.

Figure 104

Visit to the source of the Pascua River, 2008.

As in any campaign, inform, getting informed and understanding the problem is crucial. We reproduce here the first pamphlet (already modified) that we produced and published in 2007 and reissued in 2008.

Hydroelectric Power Plants in Aisén: the Questioned Megaproject

ENDESA, now associated with Colbún, intends to build five hydroelectric power plants with dams and reservoirs on the Baker and Pascua rivers, which would flood at least 5,910 hectares (14,603 acres) for plants with 2,750 MW installed. This energy (about 2,500 MW) would be transported by a direct current line with towers 60 to 70 meters high and a cleared band of 70 meters wide over 2,300 km long, to Santiago.

This high-voltage power line would affect 10 protected areas, 10 sites prioritized for biodiversity conservation, 2 national tourist interest zones, valuable fields, forests, and landscapes in 9 regions. Additionally, it requires another support plant on the Del Salto River, high-voltage lines between the plants, converter stations, roads, camps, work facilities, landfills, aerodromes, and ports in Puerto Yungay and El Bravo, among other facilities.

The megaproject would involve an investment of over US$5.200 million.

"Cheap" energy from a Spanish multinational for multinational mining companies

According to ENDESA data from 2005, electric demand in Chile would double in the next 10 years and triple in 20, mainly due to the incorporation of new mining projects into the Central

Interconnected System, SIC (Sistema Interconectado Central) from 2008 to 2017. In other words, the "country project" promoted by ENDESA today is primarily aimed at supplying energy to multinational mining companies such as Pascua Lama, Pelambres, and others in the III and IV Regions that contribute little to national development.

And the energy they intend to produce would not have such a low cost (without considering the natural, social, and cultural costs with which they are subsidized). In fact, its installed value in Santiago would be around US$2,000 per kW, higher than other closer alternatives.

Making promises costs nothing

ENDESA, and now HidroAysén, in addition to the fallacy of the 'national project,' propagandize benefits for the region, such as employment, development, cheap energy, improving infrastructure, and providing environmental studies.

Apart from being a "national business" of the most powerful economic groups to turn Aisén into an energy storage or battery, the economic growth that a megaproject may produce does not necessarily translate into development, let alone equity and better quality of life. The employment generated is only during the construction phase and is of a specialized, non-local nature; hydroelectric and mining activities are the ones that create the least employment (in this case, about 90 jobs). And how many sources of employment do they destroy? What happens to the thousands of unemployed individuals after the completion of the projects?

The mining and industrial sectors are the largest energy consumers (31% and 30%, respectively). The "supposed cheap energy," how cheap would it be? Additionally, its technical feasibility is questioned. Next to the Ralco and Pangue dams, the

highest electricity rate in Chile is paid. There, they also promised cheap energy.

They require the infrastructure for their own project, and they must conduct environmental studies due to legal obligations. Besides, what is the use of studies for an environment that will be irreversibly flooded or altered?

Additionally, ENDESA promised active community participation and its commitment to sustainable development. The reality we have witnessed is the non-compliance with laws, studies conducted without the corresponding authorization, misinformation, disqualification in responding to the SEC (Superintendency of Electricity and Fuels), a millionaire marketing campaign, even with gifts to underage students, people lobbying, and corruption in the community. And can a mega-project so destructive to transport energy over 2,300 km to the north be sustainable?

The scene of the events

The area where the dams are planned to be built is located in the communes of Cochrane, O'Higgins, and Tortel, in the Capitán Prat Province in the Aisén Region. The provincial population is 3,837 inhabitants (Chile-INE, 2002), and the main current activities in that area include public services and tourism, livestock, and forestry ventures.

In the area that would be affected, the ecosystem of the "evergreen mixed forest of the Baker" is found, which is unique to that location (Gajardo, R., 1994).

The Baker River basin, the source of the Pascua, and Entrada Baker (Chacabuco Valley) were prioritized for biodiversity conservation (CONAMA, 2003).

There are many exceptional landscapes and places, such as the waterfalls and rapids of the Baker and Pascua rivers.

In the initial segments of both rivers, the water quality is among the best on the planet (Salas, 2004, University of Chile, 2008, CONAMA, 2004; in CONAMA-DGA Aysén, 2009).

In that area, there are two national parks (Laguna San Rafael and Bernardo O'Higgins). One of them is also a Biosphere Reserve (UNESCO), two national reserves (Lago Cochrane and Katalalixar) (CONAF), along with at least one privately protected area and the proposed Patagonia National Park (Patagonia Conservation Foundation). It is not surprising that the declaration of World Natural Heritage for this area is also in process (CONAF - UNESCO).

In this remote place, several endangered species still survive, such as the Huemul (Andean deer), the Huillín (Southern river otter), the Culpeo fox, the Colocolo cat, the Güiña (Andean cat), the Geoffroy's cat, the Diplomystes, Darwin's frog, the Coscoroba Swan, and probably some undiscovered bird, amphibian, reptile, moss, lichen, and plant species.

The list of fauna and flora in other conservation categories is extensive. There are also significant wetlands, such as the Baker and Ñadis, some of which were proposed to be declared nature sanctuaries (Senator Horvath).

The communes where the Baker and Pascua rivers are located are part of the Area of Conservation of Culture and Environment (ACCA) in Patagonia, an initiative endorsed by President Lagos and supported by the Regional Government, as well as the Natural Parks of France and the European Community.

The Territorial Planning Plan of Aysén (Regional Government of Aysén, SERPLAC, 2005) defines tourist, livestock, forestry,

conservation, and protection uses in the area that encompasses the Endesa and Colbún project.

In the initial segment of the Baker, you find the National Tourist Interest Zone of Lake General Carrera (SERNATUR), and at its mouth are the National Monuments, the Typical Zone of Caleta Tortel, and Isla de Los Muertos (Council of National Monuments). There is also a new proposal for a National Tourist Interest Zone and National Monument (Territorial Planning Plan).

The Regional Development Strategy 2000–2006 (still in effect) of the Aisén Region has, as its objective image: "...aspiring to be a decentralized region and to achieve a high quality of life, based on high and equitable economic growth, which will be based on the conservation of environmental quality and the integration of the territory."

The current national energy reality can be summarized as: external dependence, vulnerability of the electricity sector, environmental constraints, inequity in supply, patterns of consumption and energy services, a secondary role of the State, and large profits for monopolistic companies.

The logical solution to this reality, and in the interest of the nation, should be an energy policy focused on decentralization, diversification, equity, and greater efficiency. In fact, the current government policy tends timidly towards that direction. The Hydropower Plants project in Aisén goes against or contributes to the opposite.

Currently, the electricity generated in the country is close to 12,000 MW, coming mostly from thermoelectric sources (mainly gas, followed by coal and oil) and hydroelectric power. The first wind power plant in Chile is in Alto Baguales, Aisén, with 2 MW.

The Bío Bío Region has the highest hydroelectric development and is also the most industrialized, being the second-poorest region in Chile.

Alternatives

In the Central-Southern Zone of Chile, there is still a potential for 8,000 MW of small, low-impact hydroelectric plants, 2,000 MW of large hydroelectric plants, over 8,000 MW of geothermal energy (we have 10% of the world's volcanoes!), and at least 300 MW (immediate) in biomass from forestry waste, plus the potential of biodigesters and other bioenergy. Between the I and VIII regions, solar radiation reaches 4,500 Kcal/m2/day (we have the sunniest desert on the planet!). And there are not even studies on the potential for wind, tidal, and wave energy (we have one of the longest coastlines and most intense winds on the planet!).

On the other hand, with greater energy efficiency, at least 7,000 GW/year can be obtained, equivalent to 40% of the national consumption in 1998 (about 4,000 MW!), without destruction and at a lower cost.

ENDESA: A Strategic Company Looted and Transnationalized in the "Deal of the Century"

The National Electricity Company (Empresa Nacional de Electricidad Sociedad Anónima), ENDESA, was created in 1943 with a strategic state role. It was privatized in 1989 as part of what was called " The looting of the Chilean state by economic groups" (Monckeberg, 2015).

Back then, it was the second-largest company in Chile after Codelco and generated 60% of the electricity. The privatization

resulted in over 1 billion dollars in losses for the Chilean state (Monckeberg, 2015).

Later on, 60.6% of Enersis (and with it, 60.6% of ENDESA) was sold to ENDESA Spain in what was called "The Deal of the Century," a transaction heavily criticized and penalized by the Chilean justice system. One of the key figures in these actions was José Yuraszeck, who served as the Regional Secretary of Planning in Aisén during the Pinochet government. His profits from this sale were reportedly 100 million dollars (Monckeberg, 2015)

Most of the money from the sale of ENDESA was deposited in accounts in the financial haven of the Cayman Islands, while the country was experiencing an economic recession at that time.

By 2004, Enersis had become the second-largest economic group in Chile in terms of operational income and was generating the highest profits in the country (America Economía, 2004).

And what about the partners and other appetites?

Colbún belongs to the Matte group, one of the three largest fortunes in Chile (Forbes). In this alliance, the Angelini group, the second-largest fortune in Chile, also joined.

Matte ("putative son of Pinochet" - La Nación Domingo) built his fortune with "La Papelera" (CMPC Celulosa), state bonuses for pine plantations (Mininco), polluting cellulose, electricity, and mining. Angelini, with Copec, predatory fishing, pine plantations, and cellulose (Arauco, CELCO of Río Cruces, and Mataquito).

ENDESA + Colbún together account for 68.2% of the electricity generation in the Central Interconnected System (SIC), making them, in practice, a monopoly that controls everything.

Transelec (responsible for electricity transmission) was part of the Endesa monopoly and was therefore sold to the Canadian company Hydroquebec, which transferred it to Brookfield (Canada) in 2006. It is the monopoly for the SIC Electricity Transmission and has been noted for its low level of investments and failures.

There is also the Swiss transnational Xstrata, which inherited the waters and lands from Noranda (Alumysa project) and intends, through Energía Austral, to join the energy business with the waters of Aisén, with the possibility of reviving its aluminum project. Their current goal is to dam the Cuervo, Blanco, and Cóndor rivers. Xstrata has a long international record.

AES Gener, owned by the U.S. transnational corporation AES Corp., holds rights and significant water-related requests in Aisén, claiming the potential to generate 500 MW.

And, at the core, there's water; no minor concern

Freshwater is a scarce and vital resource on the planet. Despite 70% of the globe being covered by water, only 0.2% is available in rivers and lakes, and 1.2% is in ice. This means that only 0.007% of the total water on the planet is accessible to humans (WHO).

It's also worth noting that 70% of the human body is composed of water, and one billion one hundred million people lack access to this vital liquid.

It is estimated that by the year 2035, at least 50% of the world's population will face severe water scarcity, and 29% of rivers will experience a further decline in their levels.

Furthermore, in the last 30 years, there has been a 50% decline in populations of freshwater species (Pittock, 2006).

"Water scarcity ranks first among the environmental specters threatening the community in the 21st century" (Montaigne, 2002).

There are over 48,000 large dams operating worldwide. More than 60% of the 227 largest rivers on the planet have been fragmented by dams, leading to the destruction of wetlands, freshwater species (including dolphins, fish, and birds), and the forced displacement of between 40 to 60 million people (World Commission on Dams, 2000).

The Chilean reality involves water scarcity in the northern region and pollution of water in the north and center.

Questionable Water Rights

The legislation of the past decades allowed the commodification and concentration of water rights. Thus, a few years ago, ENDESA held 81% of those non-consumptive rights without paying for the dominion over this supposedly national good for public use. And it has 96% of the non-consumptive water rights in Aisén, hindering other initiatives for regional use and development.

Water rights to ENDESA in the Baker, Pascua, and Ibáñez rivers were granted in the last months of the A. Pinochet regime (Resolutions of the General Directorate of Water (DGA) 39, 53, and 56 of January and 159 and 164 of March 1990).

HidroAysén (Endesa & Colbún) is requesting new water rights (+ still a monopoly) in the Baker, Pascua, Mañiguales rivers. Without these rights and transferring the previous ones, it will not be able to carry out its megaproject, at least not in its current version, so HidroAysén currently has feet of mud.

That idea of clean, natural energy without impacts and only benefits is part of the past.

(The World Commission on Dams Report, 2000)

There is evidence that large dams cause:

Environmental Impacts

The loss of aquatic biodiversity, upstream and downstream fisheries, and services provided by downstream floodplains, wetlands, and adjacent riverbank and estuarine ecosystems.

The loss of forests and natural habitats, populations of species, and the degradation of upstream watersheds due to reservoir inundation.

Cumulative impacts on water quality, natural flooding, and species composition when multiple dams are built on the same river.

Social impacts

Disintegration of communities and an increase in mental and physical health issues.

Inadequate mitigation, resettlement, and development programs for displaced populations.

Permanent disregard for downstream communities of dams has led to impoverishment and suffering for millions.

Poorer and more vulnerable groups, in addition to future generations, will bear social and environmental costs without proportionate economic benefits.

There are 40 to 80 million displaced people.

Social problems impact women more harshly.

FOR AISÉN, RESERVE OF LIFE.

LET'S RECLAIM AISÉN'S WATERS FOR THE PEOPLE OF AISÉN!

LET'S PREVENT US FROM BECOMING THE ENERGY STORAGE FOR MINING COMPANIES!

LET'S AVOID TURNING AISÉN INTO A SHOWCASE OF DAMS!

...LIFE IS NOT FOR SALE

Who we are in the defense of Aisén, Reserve of Life

The Citizen Coalition for Aisén, Reserve of Life, aims to exchange experiences and knowledge, and create spaces for social mobilization without claiming any representation beyond the participating organizations and citizens themselves.

Faced with the project under study by ENDESA (now HidroAysén), and after informing ourselves, we have decided to approach it with a critical perspective. This is because it is not consistent with the sustainable development of the Aisén Region and Patagonia, nor with the future vision outlined by a significant part of its population through various participatory processes. These processes range from the formal declaration of Aisén as a Reserve of Life to the spirit of the Regional Development Strategy.

Additionally, we believe that intervening on the scale proposed in the most important rivers (in terms of flow, biodiversity, and tourism potential) in the Aisén Region and Chile will not only be a true assassination of these watercourses but will also endanger all forms of life in these basins. It will also undermine the living conditions and the vision that those of us who inhabit this land have regarding the integral development, both present and future, for our communities.

The Coalition today includes CODESA, CODEFF Aisén, Costa Carrera, Patagonia Guides School, Defenders of the Spirit of Patagonia Group, NOLS School, Chamber of Commerce and Tourism of Puerto Río Tranquilo, and dozens of citizens.

Additionally, we collaborate with the Tehuelches Youth, La Voz and Los Chonkes of Tortel, the Antükülef collective of Chile Chico, the Herederos de la Patagonia group of Cerro Castillo, the Tourism Chambers of Coyhaique and La Junta, the Church of Aisén, some livestock farmers of Cochrane, Conservación Patagónica, Ecosistemas, Chile Sustentable, CODEFF, Greenpeace, International Rivers, Natural Resources Defense Council, and other organizations and individuals, most of whom are members of the Patagonia Defense Council..

HidroAysén entailed a wide range of tasks for us, from understanding the project, conducting on-site photographic documentation and information gathering, engaging in information activism and mobilization, submitting observations to the Environmental Impact Assessment (EIA), managing studies, field trips (even to inaccessible locations), conducting citizen consultations, organizing seminars on ethics, to visiting the headquarters of these companies. Due to Endesa's project, we were already in Spain in 2006, a country we would later revisit because of HidroAysén. When Endesa transitioned to Enel (Italy), our Bishop, Luis Infanti, represented us.

Since the formation of the Patagonia Defense Council, organized with an Executive Secretariat and working groups in legal affairs, communication, mobilization, politics, studies, and international matters, this was where we envisioned strategies and developed actions. The decided strategy was of the "Gulliver" type, meaning to tie down the giant wherever and however possible and try to gain time while unconventional renewable energies emerged, influencing political decisions (Environmental Impact Assessments are decided politically), and winning the support of the public in defense of the beauty of Patagonia. This was achieved through the publication of a book, inserts, giant posters, cartoons, photographs, calendars, documents, dozens of talks, exhibition stands, music and sound, a website, and social media.

By the way, there was also a profusion of news articles and journalistic research, collaboration with parliamentarians, marches, and demonstrations. Thus, a few weeks before the decision of the Aisén Environmental Commission, scheduled by the Minister of the Interior, polls already indicated that 63% of Chileans were against dams in Patagonia, which went up to 74% due to the approval of the project and the repression on May 9th, 2011.

Following that, the pressure shifted to the electoral sphere, achieving the commitment of the newly elected President to reject a project that was not politically viable and that we demonstrated was unnecessary. Thus, it was the Council for the Defense of Patagonia, with the long-term vision of the Natural Resources Defense Council (NRDC), that had to evidence, through studies commissioned to the Technical University Federico Santa María and the University of Chile, what the ministry of the sector should

have actually done: determined that there was a significant developable potential for Non-Conventional Renewable Energies (NCRE) and energy efficiency.

Given that the government, whether colluding or intimidated by the electric oligopoly, insisted on the risk of a crisis and proposed either the Aisén dams or nuclear power as the solution, a new study by S.F. Hall and Associates and Román et al. (2009) was published. This study made it very clear that sacrificing Aisén was unnecessary, and there were better alternatives, including replacing coal-fired power plants. Additionally, a study by Bloomberg's specialists on the levelized costs of generation technologies was presented, debunking myths about the "high cost of alternative energy." During that time, the Technical, Citizen, and Parliamentary Commission was formed, which incorporated our proposals to the extent that the innovative Energy Agenda of the government in 2005 was largely based on them. This Agenda included the formulation of an Energy Policy for the Aisén and Magallanes regions, a task in which we have been participating and contributing since 2015.

After the rejection of HidroAysén by the Committee of Ministers in June 2014, the company appealed to the Environmental Court, which, on October 31st, 2017, sided with the rejection. HidroAysén could have pursued an appeal to the Supreme Court through a cassation recourse. This year, the judiciary also ruled in favor of the General Directorate of Water in a dispute over supplementary water rights promised by the then Minister of Public Works, E. Bitrán, in exchange for reducing the project's flooding area. With this ruling, the project became unfeasible, and they appealed to the Supreme Court. On the other hand, Enel had long wanted to dismiss the project and its water rights, but Colbún still had some hope and insisted on continuing, paying nearly five million dollars annually in fees for unused rights. Finally, on November 17th, the board of HidroAysén submitted an essential fact to the Superintendency of Securities and Insurance, announcing the dissolution and end of the company, giving up its water rights.

As can be seen, the issue of water monopoly over entire basins for decades is a complex matter that has also led us to work on it; this involves providing information about Aisén's water heritage, legal rights, and the ethics and human rights to water.

Figure 105

The epic Patagonia without Dams Horseback Ride in Cerro Castillo, November 2007.

Figure 106

Visit to Saltón del Baker, a location near the Historical Monument Paso San Carlos and Laguna San Rafael National Park, where HidroAysén planned one of its dams.

Figure 107

PHS detained in the repression on May 9th, 2011. Source: La Tercera, May 10th, 2011.

Figure 108

One of the megamarches after the approval of the EIA of HidroAysén and the repression on May 9th, 2011. Source: Council for the Defense of Patagonia.

Figure 109

Campaign calendar for 2014. These attempted to show the actions of the previous year, places and affected people, and threatened fauna and flora, both by HidroAysén and by Energía Austral.

Figure 110

Poster inviting people to join our work to recover the waters of Aisén.

The "Río Cuervo" Project

While we were defending ourselves against HidroAysén, the heirs of Alumysa seized the opportunity of the "electric boom" and the fact that we were more than occupied to reappear with part of the hydroelectric dam-reservoir project. Now in the hands of Energía Austral, a subsidiary of the mining company Xstrata, which later became part of Glencore and partnered with the Australian electricity company Origin. Energía Austral submitted an Environmental Impact Study for its Río Cuervo project in January 2007, in which it claimed that the area was not seismic. However, in April of that year, there was an earthquake with a

tsunami in the Aisén Fjord, resulting in 10 victims and other consequences. Because of this, the then-Intendant rejected that Environmental Impact Study. The company submitted a new study in August 2009, this time with a geological report demonstrating that the area is dangerous, and its dam is located on a geological fault. Once again, the Environmental Impact Study (EIA) progressed amid irregularities, reaching the point of changing the technical team of SERNAGEOMIN. After four addendums, they attempted to approve it in January 2012, which we opposed, until they succeeded in May. On our part, we filed a protective recourse, leading the Supreme Court to annul the approval and forcing a fifth addendum to resolve doubts about geological risks. With this, the EIA was again approved in September 2013, and we appealed to the Committee of Ministers, who ratified the approval in January 2016. We had to resort to the Environmental Court of Valdivia. Meanwhile, Glencore had put Energía Austral and its projects up for sale, and in August 2017, they announced they were abandoning the project as it was unviable, something we had been warning about for years. Currently, we are waiting to see how the company will abandon its water rights, which have been generating annual payments of nearly two million dollars for unused rights for over ten years. Additionally, it remains to be seen what they will do with their lands, including 23,572 hectares (58,247 acres) of high environmental value that we have suggested converting into a protected area.

With this project, the second largest in the country after HidroAysén, our biggest challenge—having been left quite alone in the campaign with some organizations from Puerto Aisén and supportive lawyers—was to bring it to public attention. Given its location in an inaccessible place without inhabitants, few seemed to care about what happened there, no matter how pristine, beautiful, and environmentally valuable it was. Therefore, we conducted aerial photography to showcase the area, along with videos and a visit-demonstration to the river's mouth in the Aisén Fjord, for which we had to rent boats.

Finally, in January 2018, the Environmental Court announced its ruling, nullifying the Committee of Ministers' resolution from two years earlier due to insufficient compensatory measures for the loss of forests and wetlands. The work of the Environmental Prosecutor's Office (Fiscalía Ambiental – FIMA), who represented us, played a crucial role in this victory.

Figure 111

Lake Meullín, the source of the Cuervo River and the island where the dams were planned.

Figure 112

Lake Yulton, Maca River, and the Maca and Cai volcanoes.

Figure 113

Cuervo River.

Figure 114

"Sitting" after the project's approval in Coyhaique, September 2013. Source: Carlos Pérez Alvarado.

Figure 115

Demonstration at Puente Ibáñez, Puerto Aisén, 2015.

Figure 116

Last demonstrations at Los Palos River, Puerto Aisén.

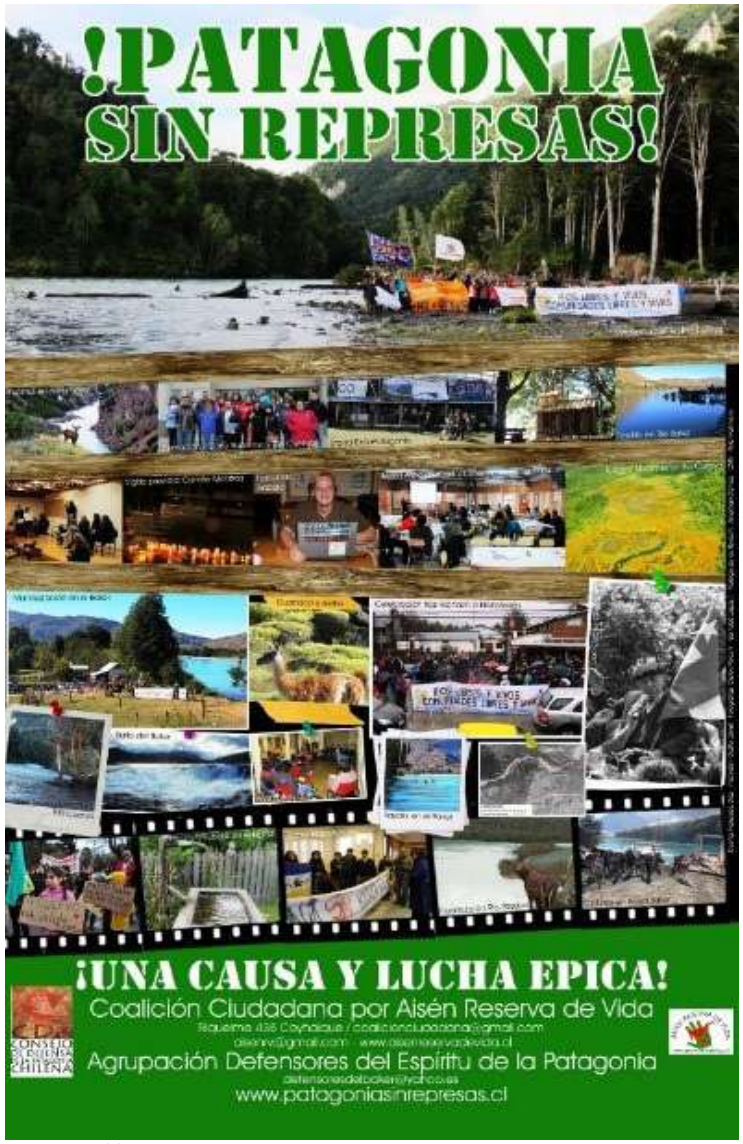

Figure 117

The historical last campaign calendar (2015) published.

The salmon megaproject.

While we were fighting against other megaprojects, salmon farms were being established one by one, eventually becoming as contagious as the smallpox of the worst example of megaprojects with disastrous effects. The industry operates with virtually no control and enjoys ubiquitous government support. We published two columns in September and October 2007 on this issue, reflecting our position.

Figure 118

Salmon Farm in Puerto Chacabuco.

Marine "Protected" Areas in Aisén.

With the encouragement of the Chilean state, from the 1930s to the 1950s, a significant portion of the forest and soil in the Aisén Region was destroyed. Subsequently, this, along with its consequences, was considered the worst environmental problem in the region. However, with the fishing boom and the salmon industry, once again supported by the state and without any discernible learning from past mistakes, since 1980, life in the Aisén sea has been systematically destroyed. When someone knowingly encourages the destruction of the land and marine life of their homeland and the planet, what is it? And when, in addition, blame is placed on residents or fishermen who have no way of knowing what they are doing, while comfortably receiving their monthly paycheck from the state, what is it?

Although those of us currently living in the region had little influence during the time of the fires, we have witnessed the collapse of one of the three valuable estuarine areas and archipelagos on the planet. At least, we have been denouncing it from the beginning, at a time when sustainability was not even talked about. Certainly, the plundering of the sea enriched a few and left behind a legacy of social problems that persist to this day. Following the plundering of the sea came salmon farming and its bad practices, invading everything. At that time, many boasted of being the 'world's leading exporter of salmon,' replacing 'collective' fishing with 'cultivating,' heralding a 'new

mainstay of the Chilean economy.' And what we witnessed were diseases and collapse, unemployment, pollution, death, economic concentration, corruption, and the appropriation of public goods, even mortgaging protected areas.

Since last year [2016], along with Héctor Kol, we have been denouncing dozens of anaerobic salmon farms located outside their concession areas for their use of pesticides against sea lice and the 'enrichment' with nutrients of the red tide. We have also been trying to highlight the urgent need to investigate the 'graveyard' of whales and fish in the Gulf of Penas. And we have not been alone: a year ago, the General Comptroller of the Republic, in various reports, pointed out that neither the Undersecretariat of Fisheries nor the National Fisheries and Aquaculture Service had assumed their responsibility to oversee salmon farms in the previous six years.

In these days [September 2017], an International Congress on Marine Protected Areas (Fourth International Marine Protected Areas Congress - IMPAC4) will be held in La Serena, and we will be there precisely to show the incompatibility of salmon farms with these areas. We know firsthand how these facilities behave in these places, and despite our complaints, the institutions responsible for the national marine heritage do nothing to prevent these abuses.

In the Aisén Region, we have several types of 'protected' marine areas. These are equally or even less 'protected' than their terrestrial counterparts. On one hand, there is the area declared as such by the Ministry of the Environment, the Pitipalena –Añihue Coastal Marine Protected Area (AMCP), to which the proposed Tortel AMCP project is added. Additionally, there is a 'Nature Sanctuary' (National Monument) in the Quitralco Estuary. Then there are the marine areas within the State Protected Areas System, administered by CONAF. These include the Corcovado,

Isla Magdalena, Queulat, Isla Guamblin, Laguna San Rafael, and Bernardo O'Higgins national parks, the Five Sisters National Monument, and the Las Guaitecas and Katalalixar National Reserves.

Additionally, it is necessary to include the priority sites for conservation identified in the Regional Biodiversity Strategy, which are:

1st: Guamblin and Ipun Islands, Kent Island to Quitralco Sector, Anna Pink Bay – Walker Estuary.

2nd: Archipelago west of the Messier Channel, Pitipalena, Carrera del Chivato, and 3 Fingers Island sector.

Of these eighteen existing areas, we know that only four have some infrastructure, park rangers, or communities involved in their real and effective protection. In fact, for most of them, their boundaries are not even available on the internet, and little is known about them. Regarding the Coastal Marine Protected Area of Pitipalena, we were told by the Regional Environmental Ministry to request information through transparency. For three, plus those four or five biodiversity sites located in Las Guaitecas National Reserve, Quitralco Sanctuary, and the Coastal Marine Protected Area of Pitipalena, we have evidence of salmon farms with poor practices inside. In the case of the 'Sanctuary,' not long ago, we reported that out of the 9 concessions and salmon farms established there, 6 have been anaerobic (indicating environmental collapse), 7 have had Salmon Rickettsial Syndrome, SRS (indicating indiscriminate use of antibiotics), 4 have had Caligus (marine lice, combated with pesticides), and 5 installations are outside their concession. In the 5 Sisters Natural Monument, although they are not inside, several salmon farms with issues are found nearby, contributing to the eutrophication of the Aisén Fjord. In the Las Guaitecas National Reserve, we have been reporting that in 2013, there were 35 anaerobic centers, and

in 2014, there were 92 centers with Caligus. The centers with SRS in those years were over 100, and there are dozens located outside their concessions.

While we don't have exact data, in the area of the Magdalena Island, Queulat, and Laguna San Rafael national parks, the evidence also shows several anaerobic centers with SRS and Caligus, some of which are located outside their concessions. Just a few days ago, a company was delivering oxygen to save their anaerobic salmon located at the northern entrance of that famous lagoon. Something similar happens around the Pitipalena - Añihué CMCP, where there are eight salmon farming centers, three of them located outside their concessions (allowed within that area thanks to an agreement of the Ministerial Committee for Sustainability!), and practically all of them have hydro-transmissible parasitic diseases, Caligus, SRS, BKD, which are combated with pesticides and antibiotics, severely affecting marine life. Additionally, five of these centers are or have been anaerobic (environmental collapse in a protected area!). It is worth noting that, according to monitoring by the University Austral of Chile, all benthic resources are overexploited.

A special case is Tortel, where the community itself, with the collaboration of its municipality, NGOs, regional tourism chambers, and Oceana, managed to prevent the opening of that area to salmon farming in 2015 while working on the CMCP proposal. However, in that area, in the sector of the Gulf of Penas and the edges of the Laguna San Rafael National Park and Katalalixar National Reserve, very strange phenomena are occurring, such as the death of hundreds of Sei whales, salmon in wellboats, and other fish, apparently triggered by red tide. Our suspicions point toward salmon farming as the cause, and we demand a thorough investigation, which the national institutions

and universities have not been undertaking as they should in theory.

Another issue is the pollution with plastic and other waste, from which virtually no beach in these 'protected' areas is exempt. Even in the most remote and uninhabited places like the Pulpo Fjord and Nef Fjord (Tortel), industrial quantities of waste are found.

Certainly, what we denounce here is unacceptable for a country that subscribes to the Convention on Biodiversity, the Washington Convention, and others, and that hosts a Congress on Marine Protected Areas. Nor is it acceptable for a region that prides itself as a Reserve of Life.

Figure 119

Rainbow over the sea of Aisén.

The sea of Aisén and the precautionary principle

The sea of Aisén provides enough material to write entire books and centuries of research. Once again, during the international seminar 'Guidelines for determining the Carrying Capacity in fjords and channels of Southern Chile,' organized by the Regional Ministry of the Environment and the CIEP (October 2017), we were able to verify how little we know about this sea, and yet, it is intervened, illustrating one of the worst examples of regional unsustainability.

The truth is that we arrived at that seminar thinking we would be surrounded by salmon farmers and industrial fishermen. However, we quickly realized that the atmosphere, with an audience focused on science, was rather critical regarding how we have acted in "our" sea. Moreover, among the excellent presentations, we came across one from one of our "mentors" in these matters (our initiation was guided by the great C.A. Viviani), Edwin Nitklischeck. This is how we told him that, from our conversations in the early 1990s, unfortunately, our view and assessment of what is happening there have not changed much. Or rather, little has been learned, and the situation is getting worse and more depressing.

From what we gathered on the first day of the seminar (we couldn't attend the second day), it's noteworthy that the Western Patagonia hosts the most extensive estuarine and archipelagic system on the planet, one of only three (or four?) such systems, and certainly the least known (no more than 1% understood). This system is different and even more volatile from Taitao southward. There are 80,000 km of coastline here, enough to encircle the planet twice, and the Patagonian sea is considered a "hotspot" of diversity, which is only partially known; there are 473 species in the first edition, 12% of them being new. This system was already inhabited 4,500 years ago; however, notable impacts began with the arrival of the Spanish and during the Republic. Thus, it can

be noted the extinction of the Chungungo, the Leopard Seal, the Elephant Seal, the Fur Seal; the destruction of 95% of the cypress and the burning of entire islands, the three million hectares of burned continental territory whose soil ended up in the sea, the overexploitation and collapse of virtually all fisheries, the decrease in abundance of benthic species, the whale graveyard (death by red tide toxins), the increasingly larger algal blooms (including invasive exotic red tide dinoflagellates), the mortality of coral banks, the reduction in the sighting of seabirds, and the ever-growing amount of garbage and effluents. Not to mention the indigenous peoples. To top it all off, climate change is perceived with effects such as acidification, a rapid change that affects the calcification of marine organisms, and the novelty is the change in oxygen composition.

The production of 400 thousand tons of salmon per year in this sea results in local impacts, such as organic waste and, consequently, the lack of oxygen, the blocking of photosynthesis and filter feeders, the alteration of 3,000 hectares (7,413 acres) by 2016, discharges of 4,000 tons of phosphorus, 200 tons of copper, 180 of antibiotics, and 34 of chemicals (to eliminate Caligus "sea lice"). There is often concern about the effects on the seabed, but not on the edges where the damage is worse. Regarding the use of chemicals, we learned that they also kill crab and king crab larvae; their effects on other species are unknown, while they are used even in "protected" areas. As for regional impacts, these are qualitative, affecting phytoplankton, the trophic chain, hypoxia, and trophic effects of escaped and feralized salmon.

We also heard that they are acting at the limits of acceptability, that the use of various indicators is necessary, that everything is considered in the Norwegian standard while Chilean law still lacks regulations for monitoring, that although water is renewed in a few days, the seabed damaged by salmon farms takes two years, and there are no studies on that. They mentioned that dinoflagellates

from red tide multiply with light and higher summer temperatures, given the presence of organic nutrients. The words of the director of the Research Center on Ecosystems of Patagonia, CIEP, were noteworthy when he stated that "taking care of the environment is the main challenge" and that understanding the carrying capacity is essential for management. Furthermore, there were announcements that a study on carrying capacity will be conducted in some fjords (a bit late, it seems!).

Finally, there was almost a consensus that it is urgent to implement a precautionary approach (Norwegian example) and the need to freeze emissions. Marine protected areas play a very important role in this as they become the baseline for control and comparison, and that's why it is essential that they exist and remain untouched.

Figure 120

Inner sea of Aisén.

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Resumen Ejecutivo Estudio de Impacto Ambiental Proyecto Alumysa - Noranda – CH2M HILL (agosto de 2001).

CHAPTER 7

COHERENCE

The bare minimum that ethics demands of us is to be consistent with what we propose and aspire to and to set an example with the 'Aisén Reserve of Life' model. Asking others to do what one is not capable of doing is quite easy. This applies to managers, to leaders, and even to architects.

Being consistent is sometimes a complicated challenge, especially when one is managing so much information about what is harmful to the environment and oneself and is embedded in a society that expects us to live entropically, consuming everything without considering the ethics of our actions. It is sometimes nearly impossible. One might try to be as consistent as possible, but they will still encounter many challenges.

Being consistent not only involves going against the current but also requires being creative and innovative. In addition, there is the question of how to transmit this lifestyle to other people.

In all of these years, we have experimented with our way of life, our housing, the alchemy of cooking, with our minds, hearts, and hands, with our way of organizing and communicating.

For example, learning about all the problems caused by aluminum production made us avoid consuming it as much as possible. Learning about genetically modified organisms, additives, and the food industry made us selective in our consumption and pushed us to produce some of our own food. Learning about waste led us to apply the 5 Rs (refuse, reduce, reuse, repair, and recycle, Alquinta, A.M, Farías, C. and Soto, F., 2003) and, of course, 'composting.' Observing how people in the countryside and villages make their own bread made us reflect on what it means to be able to make our own bread. The shocking record of

alcoholism in Patagonia kept us abstinent for years, and today, as cautious consumers, we can proudly say that we have never gotten drunk.

If we aim to care for the environment, we have to start with our own body and soul. The pain caused by the death of animals, deforestation, and fires for livestock and their consequences, and knowledge of energy conversion and slaughterhouses turned us into naturalists, which is quite complicated in the livestock-oriented Patagonia. When we could, we used to go to the office by bike or on foot (currently, we miss it).

The Architect's House

When we arrived in Coyhaique to work at the MINVU, they assigned us a social housing unit without insulation and with the main window facing a wall. Along with adding another window and insulating the wall, we planted trees in the neighborhood and tried to start a garden and greenhouse. In fact, the first conflict with SERVIU was about installing insulation in social housing units. Later, we built our own home after acquiring a plot on the outskirts of the city with a north-facing view. At that time, land prices were still affordable, but today they are worth a fortune. The place was a barren land where people, in the 1980s, even cut down fruit trees for firewood, so we planted hundreds of trees (we are now starting to enjoy the forest). We also created windbreaks and borders. Without these trees, living there would be practically impossible.

Additionally, we had to build our own access road—including a bridge over a creek— install fences, construct our own water system from a stream located hundreds of meters upstream, and set up our own underground power line after trying to buy a wind generator. The city grew and surrounded us, and these facilities have caused some problems. As you can see, a home is more than just a house, and for several years, Don Cumino Aguilar and later Silvio Naiman helped us grow a productive and organic garden. We have also been experimenting with greenhouses. One of the lessons we learned is that agriculture in these areas involves a degree of heroism. There have also been dogs, cats, chickens, ducks, geese, bees, mares and their foals, as well as the local birds, and even a fox, hares, toads, and other "critters." We have suffered from constant

attacks from the neighborhood dogs, which is one of the challenges of living on the urban fringe, the "no man's land."

While we cannot resurrect the indigenous peoples, we paid tribute to them by giving our children names from the Aonikenk or Tehuelche indigenous people.

Regarding the house of the "coherent activist architect," it is the result of years of aspirations and ideas that we gathered, aiming to be bioclimatic, regional, and with a passive solar design. It faces north (for the sun and view) and has recently been attached to a cypress-wood and glass greenhouse. It closes off to the south, tilts toward the west, where the wind blows, and is partially buried under a single roof of lenga shingles and grass (inspired by the local potato deposit and the Vikings). It emerges from the ground like a rock and rises like a forest with post and beam structure. The interior space centers around the typical Patagonian kitchen-dining area with integrated furniture and life around the stove, which integrates with other spaces. The bedrooms are located above, and there is a basement for carpentry work and storage below. We aimed to use local materials, such as wood, coligüe canes, rocks, and grass from the area, although cement was an unavoidable expense.

Today, the cost of local wood has made it a luxury. Additionally, we recycled materials and experimented with bottle masonry. The flooring is either wooden with epoxy varnish or thick ceramic. For insulation, we used wattle and daub with straw and sawdust, cardboard and wood, double glazing, reed blinds, and rush blinds. We also installed the second double camara wood stove kitchen with a hot water tank from the region and a "clivus" system for a dry aerobic biological toilet. We plan to install a solar water heater and collect heat beneath the floor. The water is used for irrigation, and we have gradually planted trees in strategic locations.

Subsequently, we also built a cabin made of bolted sticks for a herb dryer, laboratory, cellar, and woodshed, with insulation made from recycled cardboard and wattle and daub walls, and shingle cladding—a low-cost and quick construction technique.

In the meantime, a neighborhood has formed with some sense of community, with initiatives such as Mingalegre (permaculture), Hare

Krishna, music, beautiful gardens and greenhouses, and artisanal construction using earth, wood, "ecobricks," pallets, bottles, and recycling. Our son Martín Keoken and his family and friends have also been involved, which is meaningful and brings us joy. Our other son, Tomas Joshen, is focused on sound and music, with projects like PatagoniaDub, and he is experimenting with a small garden in Ñuñoa with his partner without losing his love for Patagonia.

Over the years, we have learned that the architect-urban planner with territorial ordering responsibilities must be holistic and understand everything, be a seeker, comprehend what is meant by "development," and look for solutions beyond "more of the same." As individuals, this implies maintaining the ability to observe, learn, and be in awe of the vastness of the universe and its tiniest manifestations. Thanks to this, we have become ecologists and environmentalists and dealt with various topics, such as energy, water, biodiversity, forests, protected areas, geology, fishing and aquaculture, nuclear, cultural heritage, communications, construction, and many others. As someone once told us, we are "rebels with too many causes."

In terms of transmitting our ideas, we have been doing so through our radio programs, newspaper columns, by setting an example, and through our work in organizations and campaigns. Many friends and acquaintances have followed in our footsteps.

Figure 121

P.H.S's house. The most famous photo of the southern facade, in spring, years ago.

Figure 122

P.H.S's house in the winter of 2016.

Figure 123

Celebrating the installment of the timber roof trusses, around 1992.

Figure 124

Recently completed greenhouse, attached to the house.

Figures 125 y 126

Quinta 27 in Coyhaique, before and now, our home.

Figure 127

View from the hills of our forested neighborhood.

Figure 128

Garden, cabin, and herb dryer.

Figure 129

Kitchen/dining room.

Figure 130

Interior details, above bedroom #1.

Figure 131 y 132

Front door and greenhouse door.

Figure 133

Greenhouse

Figure 134

Bathroom

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CONCLUSIONS

It is beyond doubt that change has rushed through Aisén like the free-flowing waters of its rivers in the past thirty-six years. We have made remarkable progress on the 'Aisén Reserve of Life' proposal, on its foundation, and even in demonstrating its feasibility. An important part of our progress has involved territorial planning and activism to achieve our utopia. We have also defended our choices and commitment to regional sustainability, an area in which we have had incredible victories. What we still needed to do was to systematize, recover, and publish all of our experiences.

We have learned that the territorial planner's professional field of action is extensive, and that their work is necessary. It is always good to face challenges with creativity and to look at reality with a critical spirit.

Ethics are fundamental to the work of professional land planners and activists. Ethics that respect life and its moral values and laws are unavoidable. As humans, living involves trying to care for life and exerting our influence to create a better world. Sustainability is an obligation to future generations. In this, constancy, perseverance, and positive thinking—what religious people call faith, and which is now scientifically endorsed by quantum physics —are important.

Likewise, it is important to translate ideas into action, facts, policies, and territorial planning.

Our work must be inclusive, participatory, proactive, respectful, visionary, with a basis and foundation, seeking alliances when necessary.

Holism is always good and necessary.

We also cannot refrain from taking action, denouncing, contributing when we witness any threat to life on this planet.

Combining the intellectual with practice is wise: trying, experimenting, doing it oneself to learn and demonstrate. Mind, heart, and hands must go hand in hand.

What is done with love and care usually turns out well and beautiful. Resentment only brings bitterness and violence.

One should never give up without a fight. Neither should you lose the capacity for admiration and seeing the universe in the small things.

Being ahead of your time, being a pioneer, has its cost, and being an environmental activist is often not a good business, at least in our case, in a material sense.

The preventive principle is vital: preventing, avoiding, and defending before a problem arises. Study, know, and understand before intervening. Organize the territory and give the community the power to take care of it as well.

An informed, organized, and mobilized citizenry has tremendous power. That power that "the system" reserves to perpetuate itself.

There is much to do in Aisén, and doing it well, responsibly, with love and respect, is more important than ever. There is also much not to do, to let nature live on without any (usually questionable) human interventions.

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ACRONYMS

ACCA: Área de Conservación de la Cultura y el Ambiente
Conservation Area for Culture and the Environment

AMCO: Área Marina Costera Protegida
Marine Coastal Protected Area

CETAL: Centro de Educación y Tecnología para América Latina
Education and Technology Center for Latin America

CELCO: Celulosa Arauco y Constitución
Arauco and Constitution Pulp Co.

CIEP: Centro de Investigaciones de Ecosistemas de la Patagonia
Patagonian Ecosystems Research Center

CIESA: Centro de Investigación y Enseñanza de Agricultura Sostenible
Center for Research and Teaching in Sustainable Agriculture

CIREN: Centro de Información de Recursos Naturales
Natural Resources Information Center

CODEFF: Comité Pro-Defensa de la Fauna y Flora
Committee for the Defense of Fauna and Flora

CODESA Aysén: Corporación para el Desarrollo de Aysén
Corporation for the Development of Aysén

CONAF: Corporación Nacional Forestal
National Forestry Corporation

CONAMA: Comisión Nacional del Medio Ambiente
National Environment Commission

CMN: Consejo de Monumentos Nacionales
National Monuments Council

CMT: Cuerpo Militar de Trabajo
Military Labor Corps

DGA: Dirección General de Aguas
General Directorate of Water

CDP: Consejo de Defensa de la Patagonia
Patagonia Defense Council

DIBAM: Dirección de Bibliotecas, Archivos y Museos
Directorate of Libraries, Archives, and Museums

EIA: Estudio de Impacto Ambiental
Environment Impact Asessment

ENEL: Enel Energy Europe S.R.L.

ERNC: Energías Renovables No Convencionales
Non-Conventional Renewable Energies

IREN: Instituto de Investigación de Recursos Naturales
Natural Resources Research Institute

IRN: International Rivers Network

NRDC: Natural Resources Defense Council

NOLS: National Outdoor Leadership School

MINVU: Ministerio de la Vivienda y Urbanismo
Ministry of Housing and Urbanism

MNHN: Museo Nacional de Historia Natural
National Museum of Natural History

MOP: Ministerio de Obras Públicas
Ministry of Public Works

UNESCO: United Nations Educational, Scientific and Cultural Organization

RENACE: Red Nacional de Acción Ecológica
National Network for Ecological Action

SERNAGEOMIN:
Servicio Nacional de Geología y Minería
National Geology and Mining Service

SERNATUR:
Servicio Nacional de Turismo
National Tourism Service

SERPLAC: Aysén: Secretaría Regional de Planificación y Coordinación de la Región de Aysén
Regional Secretariat for Planning and Coordination of the Aysén Region

SERVIU: Servicio de Vivienda y Urbanismo
Housing and Urbanism Service

TNC: The Nature Conservancy

UACH: Universidad Austral de Chile
Austral University of Chile

USAID: United States Agency for International Development

WWF: World Wild Fund for Nature

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