Neither philosophical liberalism championing liberty nor philosophical socialism championing equality will save us from ourselves. Human history will end in ecology, or nothing.

—J. Stan Rowe

WORK IN PROGRESS A Twenty-Year Retrospective 1990–2010

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A Twenty-Year Retrospective

1990–2010

Foundation for Deep Ecology
Conservacion Patagonica
Fundacion Pumalin
Conservation Land Trust
Fundacion Yendegaia

I entered the life of the brown forest,
And the great life of the ancient peaks, the patience of stone,
I felt the changes in the veins
In the throat of the mountain . . . and I was the stream
Draining the mountain wood; and I the stag drinking;
and I was the stars,
Boiling with light, wandering alone, each one the lord of his own summit;
and I was the darkness
Outside the stars, I included them, they were part of me.
I was mankind also, a moving lichen
On the cheek of the round stone . . . they have not made words for it,
to go beyond things, beyond hours and ages,
And be all things in all time, in their returns and passages,
in the motionless and timeless center,
In the white of the fire . . . how can I express the excellence
I have found, that has no color but clearness;
No honey but ecstasy; nothing wrought nor remembered;
no undertone nor silver second murmur
That rings in love's voice . . .

—Robinson Jeffers, from *The Tower Beyond Tragedy*

Introduction

We have lived by the assumption that what was good for us would be good for the world. We have been wrong.… We must change our lives, so that it will be possible to live by the contrary assumption that what is good for the world will be good for us.

—Wendell Berry

In the years since we left the corporate world to devote our full energies to conservation, we have been hard at work on a host of land, wildlife, restoration, and activism projects. We were so busy that we hardly noticed the years flying by. With a break ten years ago to review the first decade's efforts, and being adverse to annual reports on principle, we finally have put our minds to making a general review of what our foundations have been doing in the last two decades to help pay our rent for living on the planet.

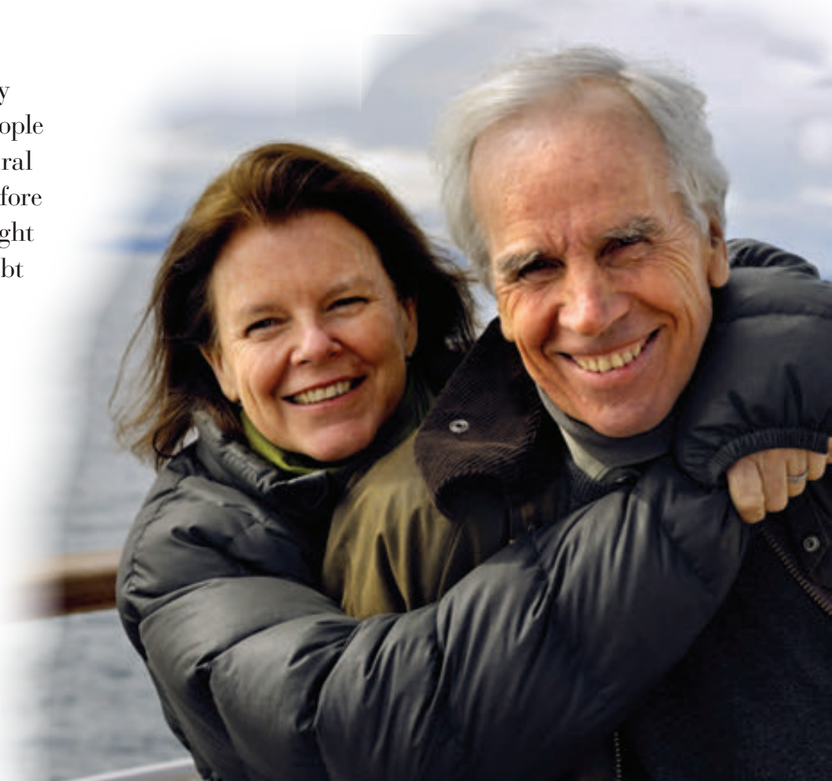
After launching the Foundation for Deep Ecology (FDE) in 1990, we subsequently founded the Conservation Land Trust, Conservacion Patagonica, and Fundacion Pumalin in that order. The last three are all dedicated to land conservation; FDE continues to support activism, and operates an in-house publishing program that has produced a series of landmark environmental books. Besides developing and funding conservation initiatives through these nonprofit organizations, we have also used personal resources to acquire and restore several family farms, as we hope to positively influence ecological agriculture and to contribute to the eco-local/organic movement. On top of that, we both enjoy seeing things grow—that is, plants and animals growing, not the seemingly endless growth of corporations and the global economy!

Once we got deeply into the work of putting together this 20-year retrospective of our conservation activities, and began compiling the information, text, and photographs, it became apparent that we had in fact been busy as bees along with our great team of people and actually had quite a bit to talk about. It got us to wondering, where did we find the time? But, apparently we did, and think that the following pages will reflect that despite having a relatively small team in Chile, Argentina, and California, a lot of interesting conservation work has been done. We're proud of this work—which of course is only a start—and are beginning to feel that our hope of leaving behind a lasting legacy of new parklands, restored landscapes, and "lighthouse" farms that can be beacons for others to build on our experience in organic agriculture may be realized.

It has also been a pleasure to support uncompromising activism and be aligned with so many leading thinkers and activists in the conservation movement who are addressing the root causes of the global eco-social crisis. Living full-time in South America for some two decades now, it has been gratifying for us to witness the growth of activism in Chile and Argentina, to see a flourishing movement of conservationists working to defend wild places and creatures from the forces of industrialization that would gladly pound the last nail in the coffin of nature. Readers will form their own assessments about the many projects and programs described in the following pages, but we are very pleased with the accomplishments of these past twenty years and hope to duplicate them in the next two decades if we are fortunate to remain in good health and with the same energy we have enjoyed until now.

The eco-social crisis is now fully acknowledged by thoughtful people around the globe, after a "cultural lag" that took many decades before the collective consciousness caught up with reality. There is no doubt now that there exists an eco-social crisis, and that it is a huge and growing storm cloud darkening the future for nature and people. The debate today is about how to solve it. Similarly, the issue

Kris and Doug Tompkins



of anthropogenic climate change—one facet of the eco-social crisis—also took half a century before a critical mass of common acceptance generated any political will to address it. But public attention has not yet caught up to the reality of the worldwide extinction crisis—species loss and unraveling ecosystems due to habitat destruction, fragmentation, over-harvesting, and invasive species—a suite of threats even more immediately dangerous to the diversity of life than climate change.

We consider the extinction crisis the "mother of all crises," which must be dealt with even more force than climate change, although both must be confronted simultaneously. All of our work is ultimately focused on biodiversity conservation, for the entire ecosphere and its future depend on healthy, vibrant, and rich biodiversity. Without that, we might as well kiss our beautiful planet goodbye (at least for this geologic age), thanks to human stupidity and shortsightedness. Given current trends, that is looking more and more likely.

Consequently, all our programs are oriented toward stopping the extinction crisis. In simple terms, we believe that to address the root causes of the problem, all of humanity's cultural, social, economic, and political decision-making must shift, and begin to value and accommodate wildness. Toward this end, we have put considerable resources into eco-education and outreach initiatives focused on children, political leaders, and local citizens in the communities where our conservation projects are located. Helping build a widely embraced culture of conservation is crucial because there is no way that human beings will be able to manage the planet; it is arrogant and foolish to even think so. Wild processes operating across vast expanses of wild land (wilderness) have a successful, multibillion-year track record of "managing" biodiversity, that is, allowing evolution to unfold on its own terms. Conversely, we humans are doing just the opposite by over-domesticating and over-humanizing the vast majority of the planet's landscapes, over-extracting resources and overshooting the ecosphere's carrying capacity including the atmosphere's ability to absorb carbon dioxide and other human emissions. In short, humanity is in MEGA-OVERSHOOT—something never having occurred in all of geological time and driven purely by human overpopulation, overconsumption, and the use of dangerous technologies. Our foundations and all those who work with us are striving to reverse these trends and conditions.

Our top priority has been to restore and preserve wild habitat by creating new protected areas, especially national parks. Through our foundations and in collaboration with various partners we've put more than two million acres of land into permanent conservation so far, created two new national parks, and are working to establish additional parklands.

Agriculture affects more of the land than any other human activity and for this reason it is our second largest program area after biodiversity/wilderness conservation. Oddly enough, there are very few foundations with both wilderness/biodiversity and agriculture programs. It is our contention that focusing both on wildlands preservation and on developing agricultural systems where conservation is a consequence of production are complementary areas of work. As our colleague Wes Jackson of The Land Institute in Kansas asserts, "If we cannot turn around agriculture then there is no hope to turn around the environmental crisis." Our family farms are often located adjacent to conservation area projects, and act as supplementary and complementary supports to ecosystem health, helping parklands maintain their ecological integrity. Well-managed agricultural lands serve as biophysical buffers, expand wildlife habitat in the nonproductive areas of the farms, and act as de facto park ranger stations that can deter poachers and intruders.

The third primary area of interest to us is landscape restoration. In the last twenty years we have become highly experienced in restoring agricultural land, grasslands, and forests. In the places that we work in Chile and Argentina, we have become leaders in the field. Apart from its absolute necessity to put back together broken ecosystems, restoration is about as satisfying an activity as we can think of. Virtually nothing is more pleasurable than to nurse sick land back to health. We have found that everyone has a wide smile and swells with pride after seeing a restoration job well done. If ever there was a growth industry it is ecological restoration—everywhere one turns a person can see opportunities to help degraded, abused landscapes recover their beauty, integrity, and diversity. There are centuries of such work to be done, and that kind of growth we can get excited about.

The fourth program area where we've focused attention is critiquing the economic models, assumptions, and worldview that undergirds the current system, what Ed Abbey correctly described as an "expand-or-expire agro-industrial complex—a crackpot machine—that the specialists cannot comprehend and the managers cannot manage. Which is, furthermore, devouring world resources at an exponential rate." The Foundation for Deep Ecology has supported leading thinkers, authors, and activists who are resisting this crackpot machine, particularly economic globalization with its global and regional trade pacts and undemocratic structures. FDE has been a pioneer in this area of grantmaking, helping form the International Forum on Globalization and funding numerous think tanks and institutes working on these issues, as well as convening various symposia and conferences of our own design. We maintain that the current economic system of techno-industrial growth based on

corporate capitalism is deficient and is driving the eco-social crisis and must be systemically critiqued to understand its inherent logic and its pathologies before either structural changes or meaningful reforms may take place.

The fifth area of interest to us has been technology criticism. In our view, the weakest area in today's progressive social movements is the ability to foresee the negative side effects of mega-technologies. This has produced confusion as to what kind of strategies should be employed in many areas, especially the response to global climate change and other related crises. Modern society is enamored with technology and accepts new technologies uncritically. In time it often becomes apparent that it would have been wiser to avoid developing or spreading that technology. It is now easy to imagine how the world might have been better off without nuclear technology, the Green Revolution in agriculture, gunpowder, television, internal combustion engines, and so on. Through the years our foundations have supported writers, thinkers, and activists involved in constructive, academically rigorous, systemic technology analysis. We hope this work leads to a better understanding of the intrinsic logic of these mega-technologies and their "autonomous" nature, which compels society to act and behave under their logic rather than what is healthy for the ecosphere, and thus in turn for humanity.

As one can see, these program areas are unusually varied, but we believe that on-the-ground initiatives to protect parklands, restore conservation areas and farms, recover endangered species, and create durable local economies complements "idea work"—which helps build the intellectual infrastructure necessary to make deep structural changes in the economic technologies that we use to operate our societies. For ultimately, there can be no hope of ending the eco-social crisis until people abandon the arrogance of humanism and adopt an ecocentric worldview.

Our thinking on this question has been deeply influenced by our long friendship with and admiration for the late Norwegian philosopher Arne Naess. Naess believed, as we do, that "the front is long"—that all these necessary changes to move human society toward harmony with the rest of life would take decades and centuries. And so the conservation activities described here are truly a work in progress. With all of these efforts, we hope to do our part to help society make that shift toward learning how to share the planet with other creatures.

Doug and Kris Tompkins

20-Year Retrospective

MILESTONES

1990

The Foundation for Deep Ecology (FDE), a private charitable foundation incorporated in California and dedicated to supporting conservation activism, is endowed by Doug Tompkins.

1991

Doug Tompkins purchases a run-down coastal farm on the Renihue Fjord in southern Chile and begins buying nearby land to form Pumalin Park, a public access park operated under private initiative.

1992

Doug Tompkins moves full time to Renihue and begins restoring the farmland, intending to see if thoughtful, organic production could be compatible with conservation in that part of Chile.

The Conservation Land Trust (CLT), a private operating foundation incorporated in California and endowed by Doug Tompkins, is created to acquire land for Pumalin Park and support other land conservation projects in Chile and Argentina.

1993

Doug Tompkins marries Kris McDivitt, longtime CEO of Patagonia, Inc, and they begin sharing their conservation work.

FDE convenes the first of two gatherings of leading thinkers about the perils of megatechnology, symposia that birth the Jacques Ellul Society.

1994

The Conservation Land Trust, in partnership with American philanthropist Peter Buckley, acquires roughly 208,000 acres along the southern Chilean coast near the Corcovado Volcano.

FDE publishes *Clearcut: The Tragedy of Industrial Forestry*, the first in an ongoing series of photo-format books designed to stimulate activism on ecological issues.

FDE brings key activists from around the world together to develop a common framework of resistance to economic globalization. This conversation launches the International Forum on Globalization (IFG).

1995

IFG becomes an independent nonprofit, and organizes a massive, multiday teach-in on globalization in New York City with FDE support. Similar teach-ins would be held around the globe in subsequent years, helping grow the anti-globalization movement.

1996

CLT continues land purchases for Pumalin Park, a process that lasts nearly a decade and results in a protected area of more than 711,000 acres; 99 percent of the acreage is purchased from absentee landowners.

1997

CLT begins a major project in northeastern Argentina's Corrientes Province by purchasing Estancia San Alonso, a cattle ranch in the middle of the Ibera wetlands. In the subsequent decade, CLT purchases almost 350,000 acres for conservation and grassland restoration in the area.

1998

CLT and partners provide funding to buy the Estancia Yendegaia on Tierra del Fuego in Chile's XIII region; the conservation area is later transferred to Fundacion Yendegaia for continued administration and stewardship.

CLT–Argentina, a subsidiary of the Conservation Land Trust, is founded to administer land and wildlife recovery projects in the Ibera region of Corrientes Province.

1999

FDE sponsors the radio production "Deep Ecology for the 21st Century," a thirteen-part series broadcast nationwide to introduce the public to the principles of deep ecology.

FDE conceives and is a primary funder of the Turning Point Project, an independent organization that runs an unprecedented advocacy advertising campaign, publishing full-page ads in the *New York Times* over a six-month period. Topics include the extinction crisis, industrial agriculture, economic globalization, and biotechnology.

2000

Kris Tompkins founds the Patagonia Land Trust, a public charity incorporated in California dedicated to preserving biodiversity and creating parklands in southern Chile and Argentina. The organization's name is later changed to Conservacion Patagonica (CP).

CP funds the purchase of 165,000 acres of land in southern Argentina that is subsequently donated to the Argentine national parks administration to create Monte Leon National Park, the country's first coastal national park.

2001

FDE makes more than one hundred grants totaling $2 million to NGOs working to protect biodiversity, promote ecological agriculture, and oppose megatechnology and globalization.

2002

FDE publishes the photo-format activist books *Fatal Harvest: The Tragedy of Industrial Agriculture* and *Welfare Ranching: The Subsidized Destruction of the American West.*

To continue the conservation work in Ibera, Doug Tompkins purchases the Perez-Companc forestry company, thus acquiring various tree plantations and cattle ranches totaling more than 272,000 acres. A small but crucial part of the acreage along the Ibera marshlands is later spun off for habitat preservation, with no resource management.

2003

A major, multiyear program of ecological restoration commences on the properties acquired from the Perez-Companc forestry company. Estancia Ana Cua, Estancia El Transito, and other ranches will become models of sustainable, organic production, helping buffer the Ibera marshlands.

2004

CP purchases Estancia Valle Chacabuco, a 175,000-acre sheep ranch in Chile's Aysen Province, and launches the Patagonia National Park project, intending to create and donate a new national park to the Chilean park system.

2005

Fundacion Pumalin, a Chilean nongovernmental organization, is incorporated with a mission to preserve Pumalin Park. On August 19, Pumalin Park becomes an official Nature Sanctuary under Chilean law, and President Ricardo Lagos visits the park for the dedication ceremony.

After years of funding and development by FDE, *The Selected Works of Arne Naess* are published. The ten-volume series collects six decades of writings by the Norwegian philosopher and father of deep ecology.

To spur creation of a new national park, CLT and Peter Buckley donate their property near the Corcovado Volcano to the Chilean people; with some adjacent military land incorporated, Corcovado National Park, at nearly 730,000 acres, becomes the sixth largest park in Chile.

2006

FDE publishes the photo-format activist book *Wildfire: A Century of Failed Forest Policy*, which promotes wildfire as a vital ecological agent in healthy ecosystems.

2007

CLT donates roughly 727,000 acres of land comprising Pumalin Park to the Chile-based Fundacion Pumalin.

FDE publishes the photo-format activist book *Thrillcraft: The Environmental Consequences of Motorized Recreation* documenting the growing motorized assault on public lands around the United States.

CP begins construction of The Lodge at Valle Chacabuco, the first public access infrastructure for the future Patagonia National Park.

Kris and Doug Tompkins purchase Laguna Blanca, a 7,420-acre farm in Entre Rios Province, Argentina, and the nearby Alto Feliciano farm, converting the properties from conventional to organic production.

2008

CP purchases an additional 21,000 acres of contiguous land for the future Patagonia National Park, initiates research on huemul deer–puma interaction (the first study of its kind in Chile), and continues construction of park buildings, including employee housing.

FDE publishes the award-winning photo-format book *Wildlands Philanthropy*, which celebrates protected natural areas from Alaska to Tierra del Fuego saved by American conservationists using private funding and initiative.

2009

Kris and Doug Tompkins purchase a third farm, Malambo, in Entre Rios Province, Argentina, to form a set of highly diverse, high production organic farms in this area.

FDE publishes the photo-format activist book *Plundering Appalachia: The Tragedy of Mountaintop-Removal Coal Mining*, which documents the coal industry's assault on the landscape and people of Appalachia.

2010

FDE publishes *CAFO: The Tragedy of Industrial Animal Factories*, a large-format book that shines a spotlight on concentrated animal feeding operations—"CAFOs"—the inhumane and ecologically destructive factory farms where increasing amounts of the world's meat, milk, eggs, and fish are produced.

CP breaks ground on the new trail system and first major campground for the future Patagonia National Park.

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PART 1

SAVING WILD LAND

Wilderness is the arena of evolution.

—Dave Foreman

SAVING WILD LAND

A Response to the Extinction Crisis

During the past few decades, as scientists around the globe cataloged the number of species that had disappeared or were on the precipice of extinction, a scientific consensus emerged among ecologists: the Earth has entered the sixth major extinction spasm in its history, this time not due to an asteroid strike or geological event, but due to human action—*Homo sapiens'* explosive population growth and concomitant destruction of natural habitats. The collective weight of 6.8 billion people going about their everyday activities—eating, manufacturing, warring, polluting, recreating, transporting themselves and their stuff, etc.—has appropriated so much of the planet's productivity, and displaced so much of its biodiversity, that humans are causing a mass die-off of our fellow creatures. Global climate change is expected to accelerate this biological cataclysm, a contraction in life's diversity unprecedented since the age of dinosaurs ended sixty-five million years ago.

The antidote to this ecological tragedy is challenging but straightforward: reduce human overexploitation of nature's wealth. Central to this aim is protecting big wilderness areas surrounded by well-managed farms and timberlands, and connecting the conservation lands with habitat linkages that allow wild creatures freedom to roam. This core-buffer-corridor model of landscape-scale conservation is now embraced by governments around the world and universally endorsed by conservation biologists as the best approach to restore and maintain biodiversity. In most parts of the temperate world, existing natural areas are too small and isolated to sustain natural processes and wide-ranging species. Ecological restoration is vital. But some parts of the globe still offer opportunities to preserve nearly pristine big wild areas. Certain areas in the Southern Cone, such as the coastal fjords region of south Chile, Argentine and Chilean Patagonia, and the wetlands of northeastern Argentina, offer a chance for preserving such terrain. Creating parklands in these regions has numerous ecological and social benefits, including recreation and climate stability.

Saving wildness has been the fundamental goal of all of Doug and Kris Tompkins's conservation work since they moved to South America in the early 1990s. All the many programs, projects, and organizations they have launched serve this end—but the effort to create new parklands has topped the agenda. The tradition of individuals and associations using private wealth to buy land for nature preserves is well established, but in the modern era, the scale of conservation land resulting from the Tompkinses' philanthropy, combined with donations from like-minded supporters, is unprecedented: roughly 2.2 million acres in multiple new national parks, provincial parks, and other reserves.

As of 2010 this work continues, with ongoing efforts to create the future Patagonia National Park in Chile's Chacabuco Valley, establish a huge new national park in the great Ibera marshlands of northern Argentina, and build the region's first transboundary national park with a donation of lands in Tierra del Fuego from Fundacion Yendegaia to the Chilean parks administration. Other likely land donations—at Melimoyu, Cabo Leon, and Pumalin Park—are all intended to build out a world-class system of parklands that will help sustain beauty and biodiversity, and counter the global extinction crisis.

Ecosystem Diversity

The habitat that the Conservation Land Trust, Conservacion Patagonica, Fundacion Pumalin, and Fundacion Yendegaia have conserved includes a diversity of ecosystem types. From the subtropical wetlands and savanna of northern Argentina to the arid Patagonian steppe of southern Chile and Argentina, from the subantarctic forests of Tierra del Fuego to the Valdivian rainforest in coastal Chile, the various parklands conservation projects that these organizations have spearheaded over the past two decades center on one principle: putting nature first. First restore and preserve healthy ecosystems that support the diversity of life, and then there is a chance to create truly sustainable human societies.

The various ecosystem types conserved in these parklands initiatives may not receive as much attention as tropical rainforests, but they all face varying degrees of threat. Moreover, the areas targeted for conservation are some of the most beautiful, ecologically vibrant, and wild places left on the planet. The Ibera marshlands region of Corrientes Province, Argentina, is one of the Earth's largest freshwater wetlands, with exceptional wildlife habitat. Pumalin Park and Corcovado National Park in Chile's Palena Province now secure the best-protected examples of Valdivian rainforest. The future Patagonia National Park in Chile's Chacabuco Valley offers breathtaking scenery, retains its full complement of native species, and is a globally important example of grasslands restoration. Strategic land conservation in these various ecosystems and complementary wildlife recovery projects are necessary to create a system of ecological reserves that sustains the region's wildlife, natural processes, and landscape diversity.

Protected Area Profiles

PUMALIN PARK

715,218 acres/289,562 hectares; acquired 1990–1998
Project of Conservation Land Trust
Lakes Region, Chile

In 1991, Doug Tompkins bought a large, semi-abandoned plot of land in the Renihue Valley of the Chilean province of Palena. A mountaineer and conservationist who had been visiting Patagonia since the early 1960s, Tompkins's idea was to protect the 42,000-acre tract, most of which was primeval rainforest, from future exploitation. After moving to Renihue to live full time, Tompkins began expanding the conservation lands in the area by acquiring additional properties from willing sellers. Ultimately, roughly 98 percent of the park acreage was bought from absentee landowners.

The Conservation Land Trust, a charitable foundation endowed and led by Tompkins, subsequently added approximately 700,000 acres in nearly contiguous parcels to form Pumalin Park, which was declared a Nature Sanctuary on August 19, 2005, by then-president Ricardo Lagos. This special designation by the Chilean government grants the land additional protections to secure its ecological values and prevent development. The Conservation Land Trust later donated the protected lands to Fundacion Pumalin, a Chilean nongovernmental organization, for their administration and ongoing preservation as a public access park, managed similarly to a national park but under private initiative.

While nature-related philanthropy has a long tradition in the United States, large-scale private land acquisition for parks was unfamiliar in Chile, and initially generated skepticism and political opposition. Over the years of the project's development, confidence has been built, both locally and nationally,

as Pumalin Park's hiking trails, campgrounds, information centers, cafes, and cabanas began serving thousands of visitors annually.

Several small farms positioned strategically around the nature sanctuary contribute to the park's stewardship. With activities such as animal husbandry, cheesemaking, ecotourism, wool handicrafts, and honey production, these organic farms function simultaneously as de facto park ranger stations and visitor information centers. In this way both conservation and a contribution to the local economy are achieved. The project actively works to include neighbors of the park, to create a broad-based cultural appreciation for wilderness and biodiversity conservation, and to demonstrate how an agrarian economy, carefully matched to local conditions, can sustain biodiversity while creating economic opportunity.

Although Chile's faunal diversity is relatively low compared to most South American countries, it is rich in flora, especially endemic species and subspecies found only in Chile. The evergreen broad-leaved forest, known in Chile as the Valdivian rainforest, includes thousands of plant species. The average annual rainfall in the coastal forests of Pumalin Park is more than 235 inches. These exceptionally wet, original forests reach all the way to the ocean, something that is increasingly rare worldwide. Above the rich, green forests stand the snow-clad Andes, making for one of the most spectacular coastlines on Earth—a landscape of extraordinary grandeur and wildness.

This landscape, as preserved in Pumalin Park, offers Chilean and international visitors the opportunity to experience pristine nature and develop a heightened appreciation for wild beauty, which will, hopefully, inspire them to value and protect the natural world in their daily lives back home. Moreover, as an example of wildlands philanthropy on a grand scale—a place where private generosity is supporting public values—Pumalin Park is a model for other private conservation initiatives, large and small.

PUMALIN PARK

CORCOVADO NATIONAL PARK

726,448 acres/293,983 hectares; acquired in 1994
Project of Conservation Land Trust & Peter Buckley
Lakes Region, Chile

The Conservation Land Trust, together with American philanthropist Peter Buckley, purchased roughly 208,000 acres (84,200 hectares) along Chile's coast south of Chaiten in 1994. The land had been held by a European corporation whose principal owner, an Italian businessman, had targeted it for a massive development and logging operation. That ill-considered scheme eventually foundered, and the landscape remained nearly pristine. A small area along the coast had been logged in the early twentieth century, but the forest had recovered well and the property contained the largest stand of Guaitecas cypress trees in Chile. In 1997, another 1,235 acres were added to the Corcovado-area holdings.

The Corcovado tract presented an incredible conservation opportunity. It was surrounded by a vast expanse of federal land, mostly mountainous terrain, under the jurisdiction of the Chilean Armed Forces and left in its natural state. At the heart of this public land was the Corcovado Volcano, one of the most distinctive mountains in Chile. In 2002, through an intermediary, Conservation Land Trust founder Doug Tompkins approached then-president Ricardo Lagos with a proposition: If the private lands around Corcovado were given to the state, would the government contribute the adjoining federal land and create a new national park? The property was not vital to military readiness, and both President Lagos and General Juan Emilio Cheyre, the nation's top military officer at the time, endorsed the idea.

Corcovado National Park, Chile's sixth largest, was formally designated by President Lagos in January 2005. This grand new wilderness park exists largely because of his determination. Corcovado covers approximately 726,000 acres and contains some eighty-two lakes, many ringed with ancient forests where pumas haunt the shadows. The brackish estuaries where the Corcovado and Tic Toc rivers spill into the Bay of Corcovado are exceptional wildlife habitat. Immense colonies of shorebirds coat the beaches. Penguins scamper about the rocks. Marine mammals, including seals and sea lions, thrive in the bay, which was discovered to be a crucial nursery area for blue whales, Earth's largest animals. The bay, once the lair of pirates, is now proposed to become Chile's first marine sanctuary, assuring a continuity of protection for wildlife from ocean bottom to mountain peaks.

CORCOVADO NATIONAL PARK

CORCOVADO NATIONAL PARK

FUTURE PATAGONIA NATIONAL PARK

195,285 acres/79,029 hectares; acquired 2004–2008
Project of Conservacion Patagonica
Aysen Region, Chile

When complete, the future Patagonia National Park in Chile's Aysen Province will be a nearly 650,000-acre wilderness area with spectacular scenery, thriving wildlife populations, and outstanding visitor facilities. Under the leadership of Kris Tompkins and with the support of many donors, Conservacion Patagonica purchased a large private ranch, the 174,770-acre Estancia Valle Chacabuco, in 2004 to launch the park effort. More than twenty thousand acres have since been acquired, with plans to increase the acreage as opportunities arise. Conservacion Patagonica, a public charity dedicated to expanding parklands in southern Chile and Argentina, intends to donate its holdings, which would be combined with two adjacent national reserves, to create the new protected area.

The Chacabuco Valley's extraordinary beauty, biodiversity, and wildness have made it a top conservation priority of the Chilean national parks administration for decades. All of the region's native species, from Andean condors to guanacos and pumas, are still present. The future park will dramatically expand the amount of permanently conserved habitat for the huemul deer, the iconic—and now endangered—species that graces Chile's national shield.

The birth of a grand new national park in Chilean Patagonia has captured the imagination of conservationists around the world. With generous support from the Butler Conservation Foundation, Gordon and Betty Moore Foundation, Wallace Genetic Foundation, the Arcadian Foundation of London, and many other institutional and individual donors, Conservacion Patagonica has implemented a suite of innovative restoration, science, and educational programs in the Chacabuco Valley. Construction of the park's public facilities began in 2006. Despite the area's remoteness (many building materials must be transported nearly a thousand miles on rough roads), the work is well advanced. The new structures are being crafted to be highly energy efficient and powered by renewables, durable in the harsh Patagonia climate, and welcoming to visitors.

Using volunteers from around the world, the park project's science team is undertaking the largest-ever grassland restoration initiative in Chile and one of the largest on Earth—removing fencing and other ranch infrastructure, eradicating exotic species, countering erosion, and restoring native plants. In the few years since livestock were eliminated from the landscape, the historically overgrazed grasslands are showing strong recovery and wildlife populations are rebounding. An ambitious but achievable objective, the future Patagonia National Park is a tangible, hopeful example of people working together to help heal a degraded landscape, encourage ecological processes, and provide a permanent sanctuary for wildlife.

FUTURE PATAGONIA NATIONAL PARK

FUTURE PATAGONIA NATIONAL PARK

MONTE LEON NATIONAL PARK

164,996 acres/66,800 hectares; acquired in 2000
Project of Conservacion Patagonica
Santa Cruz Province, Argentina

Monte Leon, Argentina's first coastal national park, was born in 2002 as the result of creative collaboration between Argentine and American conservationists, and a generous act of wildlands philanthropy. The land, a former sheep ranch including more than twenty-five miles of ocean frontage on the Atlantic, lies on the southern Atlantic coast of Patagonia south of the Santa Cruz River estuary. The property had long belonged to the Brauns, one of the most prominent landowning and ranching families in Patagonia history, but was desired by the Argentine national parks administration because of its wildlife and scenic values. Years of off-and-on negotiation with the Braun family, however, had produced little progress toward creating a new national park.

When Dr. Francisco Erize, a former director of the Argentine national parks administration, recommended the conservation project to Kris and Doug Tompkins, Conservacion Patagonica became engaged in the effort. A public charity headed by Kris Tompkins, Conservacion Patagonica supplied the funds for an Argentine NGO, Fundacion Vida Silvestre Argentina, to formally acquire the property in 2000 and transfer title to the national parks administration. (A key source of the land acquisition funding came from Kris Tompkins herself.)

A complicating factor was that the property needed to be formally ceded from provincial to federal jurisdiction to establish a national park; that required unanimous support of the provincial legislature—not something easy to achieve in rural Argentina, where anti-federal sentiment sometimes runs strong. Ultimately this vote was recorded, the land was bought and conveyed to public ownership, and a management plan for the new park was developed by a team of government officials and conservationists.

Monte Leon harbors vast colonies of birds—including Magellanic penguins—and marine mammals along the coast. Southern right whales cruise by on their annual migrations. Inland, the landscape is arid grassland typical of the Patagonian steppe. Its characteristic wildlife includes guanaco, puma, rhea, grey fox, and various small mammals and birds. After decades of intensive grazing by domestic livestock, the grasslands are recovering well. As a national park, this spectacular landscape will continue to regain wildness, and forever offer an experience to visitors similar to what Charles Darwin found when he and the crew of the HMS Beagle explored the area in 1834.

MONTE LEON NATIONAL PARK

MONTE LEON NATIONAL PARK

DOR-AIKE

81,510 acres/33,000 hectares; acquired in 2002
Project of Conservacion Patagonica and
Conservation Land Trust–Argentina
Santa Cruz Province, Argentina

The Estancia Dor-Aike, a private ranch of approximately 81,500 acres was purchased as a restoration project and to add acreage to the newly formed Monte Leon National Park, which Conservacion Patagonica had funded as a gift to the Argentine national parks system. A sheep ranch, the property had been overgrazed for decades but is a lovely example of the Patagonia steppe ecosystem. Dor-Aike's rolling grasslands offer scenic views and rich wildlife habitat, with armadillos, foxes, pumas, guanacos, and many grassland bird species present.

The property also offered lessons about the region's settlement and land-use history. Dor-Aike's northern boundary stretches along twelve miles of the Santa Cruz River. When the young Charles Darwin visited Argentine Patagonia while on the multiyear expedition he chronicled in *The Voyage of the Beagle*, Captain Robert Fitzroy anchored the ship at the mouth of the Santa Cruz and led an exploratory party upriver, passing by lands that many decades later would be settled as the Estancia Monte Leon. Darwin found the landscape "extremely uninteresting," but noted how puma tracks "were to be seen almost everywhere on the banks of the river."

Following Dor-Aike's purchase in 2002, livestock were removed so that the native grasslands could begin to recover, and roughly 7,400 acres east of Highway 3—lands contiguous with Monte Leon—were donated to the Argentine parks administration for inclusion in the new national park. In 2007 the Conservation Land Trust sold the remaining lands west of Highway 3 to a private buyer who pledged to keep the livestock numbers low and emphasize wildlife-friendly management practices.

EL RINCON

37,050 acres/15,000 hectares; acquired in 1992
Project of Conservacion Patagonica
Santa Cruz Province, Argentina

Doug Tompkins acquired this private ranch of approximately 37,000 acres on the flanks of the Andes in Argentina's Santa Cruz Province in 1992, and subsequently donated it to the Conservation Land Trust. The overarching goal was to restore its degraded grasslands, preserve the land's ecological integrity, and eventually donate the property to expand the adjacent Perito Moreno National Park. Efforts to add the land to the Argentine parks system failed during the tenure of President Carlos Menem due to lack of interest from the government. CLT subsequently conveyed the property to Conservacion Patagonica, which will oversee its protection until the Argentine national parks administration can assure its perpetual care.

The Lacteo ("milky") River runs through the main valley at El Rincon. The river is fed by the great glaciers covering Cerro San Lorenzo, one of the most majestic mountains in Patagonia. El Rincon is located on the southern slope of this mountain, the second highest peak in the Patagonian Andes. Cerro San Lorenzo's dramatic southeast face has tormented climbers of international caliber; it is of Himalayan proportions, exceedingly difficult and perilous, and remains unclimbed as of 2010.

El Rincon's previous owners had allowed severe overgrazing by domestic livestock. Since it was purchased for conservation and the livestock were removed, the grasslands at El Rincon have shown strong recovery, and the forest cover on each side of the valley is expanding. Conservation biologists believe that huemul deer eventually may recolonize the area, since the neighboring national park contains a population of this endangered species. The landscape qualities of El Rincon and Perito Moreno National Park make the region an exceptional example of wilderness in an overdeveloped world, precious both for the land's beauty and biological value.

IBERA

341,205 acres/ 138,140 hectares; acquired 2001–2006
Project of Conservation Land Trust
Corrientes Province, Argentina

Sometimes called "the Argentine Pantanal," Ibera is one of the planet's great freshwater wetlands complexes, covering more than 3.2 million acres of grasslands and marsh in Corrientes Province of northeastern Argentina. The landscape supports fabulous wildlife including more than 360 species of birds. Doug and Kris Tompkins were introduced to the area's beauty, biodiversity, and conservation potential in the late 1990s; since then the Conservation Land Trust–Argentina and the Tompkinses personally have acquired more than 400,000 acres for biodiversity conservation and ecological agriculture purposes in the Ibera watershed.

The primary goal of the Ibera project is to expand and upgrade conservation protections for land within the Ibera Natural Reserve, a protected area designated by the province in 1983. The reserve is comprised of roughly 40 percent public land and 60 percent private property controlled by some 1,800 landowners. Through habitat acquisition, grassland restoration projects, public outreach, and legal activism, the CLT–Argentina team has worked for the last decade to strengthen the public core of the reserve, increase local support for conservation, defend the region against threats to its ecological integrity, and augment and/or restore wildlife populations, especially of endangered or extirpated species including the pampas deer. The first such program launched by CLT biologists has successfully reintroduced giant anteaters, a native species that had been absent from the Ibera area for decades.

One key element of the conservation program is to demonstrate biodiversity-friendly management techniques on agricultural properties within the Ibera watershed. Consistent with a core-buffer-corridor model of landscape conservation, the various ranches owned by CLT in the watershed help buffer the core areas from negative outside influences, while also modeling good stewardship to fellow landowners. The ongoing work to expand wildlands, create broad public support for conservation, and support a vibrant agrarian economy has achieved significant progress on the way toward creating a possible future Ibera National Park that would contain its original species, including thriving populations of large carnivores such as jaguars, maned wolves, and giant otters.

RINCON DEL SOCORRO

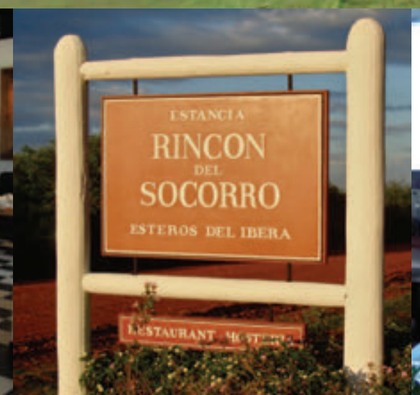
28,600 acres/11,579 hectares; acquired in 1999
Project of Conservation Land Trust–Argentina
Corrientes Province, Argentina

A historic cattle ranch in northeastern Argentina's Corrientes Province, Rincon del Socorro was acquired as a conservation property because it borders the biodiversity-rich Ibera wetlands, and subsequently has been transformed into an ecotourism destination. When purchased in 1999, the ranch infrastructure verged on collapse and the pastures were damaged by overgrazing. Removing livestock has allowed the grasslands to begin returning to their former biological richness and diversity. Marsh deer, a nearly extinct species of wild ungulate native to the region, now enjoy secure habitat here. With habitat security and no forage competition from domestic livestock, deer numbers appear to be increasing—formerly, solitary individuals were seen occasionally along the edges of the marsh, but small herds are more commonly seen today. Dozens of bird species frequent the lagunas and grasslands of the property.

The main house on the estancia, "El Casco," built in 1896 by the ranch founder, has been transformed into a nine-guestroom lodge. The hosteria Rincon del Socorro was named the most exciting eco-resort of the year in 2007 by *Tatler Magazine*. Built in the classic Spanish estancia style, the structure has been completely renovated, respecting the original architectural lines of the house. Restoring the building required two years of exacting work using local wood and other materials, while maintaining the integrity of the original structure. Trees planted in the early 1900s shade the main buildings; the mixture of local native trees, including the flowering lapacho trees, and classic azaleas and roses bring beauty and color to the area. The lodge welcomes birdwatchers and nature enthusiasts from around the world to experience the marshlands' natural wonders.

Rincon del Socorro is also home to the administrative offices of the Conservation Land Trust–Argentina and its conservation projects in the Ibera region, which include reintroducing extirpated wildlife and eradicating nonnative invasive species. Due to the logistical difficulties of traveling in the wetlands, light aircraft is often the most efficient method for moving park guards and biologists around; Rincon del Socorro serves as the base for these aircraft. Homes for conservation and hosteria employees have been renovated or created anew. Expansive organic gardens provide fresh fruits and vegetables to lodge guests and residents alike, and locally produced free-range meat serves as the centerpiece for *asados*, the traditional Argentine barbeques.

In the last decade, Rincon del Socorro has made a dramatic transformation from run-down cattle ranch to vibrant nature preserve, where native flora and fauna flourish undisturbed, and evolution is allowed to run its natural course. In place of habitat-damaging ranching practices, ecotourism contributes to the local economy and helps promote respect for the area's biodiversity.



YENDEGAIA

95,713 acres/38,750 hectares; acquired in 1998
Project of Fundacion Yendegaia
Magallanes Region, Chile

A stunning piece of wild nature at the "uttermost part of the Earth," this former cattle ranch of more than 95,000 acres stretches from the Beagle Channel up into the Darwin Range at fifty-four degrees south. Southern beech forests, expansive grasslands, rugged coastline, wild rivers, and sublime mountains make Yendegaia one of the most spectacular places on the island of Tierra del Fuego.

The property first came to the attention of the Conservation Land Trust through the intercession of Scottish forest activist Alan Watson Featherstone and Graciela Ramaciotti, an Argentine conservationist. In 1998 they accompanied Doug and Kris Tompkins and other wilderness advocates on a multiday camping trip to explore the area. All were struck by its outstanding conservation potential and later that year Doug Tompkins founded a Chilean nonprofit to purchase the land, which was being sold by a jailed drug dealer hard up for cash to pay his lawyers and debts. Financial support came from the Conservation Land Trust, Swiss philanthropist Ernst Beyeler, American conservationist Peter Buckley, and other donors. After some financial and administrative difficulties, the land was later conveyed to Fundacion Yendegaia, whose board of directors is composed principally of Fundacion Pumalin staff. These experienced conservationists manage the property and oversee its stewardship and restoration.

Besides offering incredible beauty, Yendegaia serves as a landscape bridge between two of Patagonia's wildest protected areas—Chile's Padre Alberto de Agostini National Park to the west and Argentina's Tierra del Fuego National Park to the east—allowing an unimpeded flow of wildlife. Ultimately, the goal of Fundacion Yendegaia is to donate the land to the Chilean national park system to enlarge Agostini National Park. This would be an ideal marriage of two world-class wilderness parks and create the first transboundary conservation area along the Chile-Argentina border.

CABO LEON

65,751 acres/26,620 hectares; acquired in 2001
Project of Fundacion Yendegaia
Magallanes Region, Chile

In 2001 the Conservation Land Trust acquired Cabo Leon, a property covering more than 65,000 acres located on Riesco Island north of Punta Arenas in Chilean Patagonia. Riesco Island sits on the Seno Skyring, a large seawater sound. Nearly 80 percent of the valley land is covered by southern beech forest. Upland areas terminate in rock and ice. A remnant population of the threatened huemul deer is present on the property, along with puma, fox, and a host of small mammals. A long list of resident bird species complements a very diverse flora at the ecotone, or meeting place, of the forest and steppe ecosystems.

Cabo Leon's conservation effectively stops logging on its side of Riesco Island, and although the eastern border of the property has been slightly damaged by logging, it is well on the way to recovery. One goal of the project is to inspire neighboring landowners to reduce unproductive cattle grazing and similarly allow their forests to restore themselves. With enough time and reforestation, this could begin to create a wetter microclimate eastward and help regenerate the desertifying pampa/steppe natural community, which has been badly overgrazed by sheep and cattle since European settlement of Patagonia.

The preservation of Cabo Leon came about after a series of complicated transactions. Ultimately, the Conservation Land Trust provided the funds to the Chile-based Fundacion Yendegaia to buy and administer the land. This extremely rugged and wild landscape is now fully protected for its wilderness values, but could eventually be repatriated to public ownership. Some conservationists in the region have suggested that Cabo Leon should be donated to the state of Chile for addition to the adjacent Alacalufe Reserve, which would then be upgraded to national park status. If such an outcome came to pass, the resulting national park would be one of the largest protected areas in South America—a phenomenal new wilderness area exceeding six million acres—and a major addition to Chile's national park system.

EL PINALITO PROVINCIAL PARK

9,297 acres/3,764 hectares; acquired in 1992
Project of Cat Survival Trust and Conservation Land Trust
Misiones Province, Argentina

This conservation effort began in 1990 by the Cat Survival Trust, a Britain-based wildlife advocacy group headed by Terry Moore. The protected area is lush, wet, subtropical forest located in Misiones Province, Argentina. The project initially faced a series of problems typical for a small nongovernmental organization working in a remote area of an unfamiliar country. But by 1992, with the help of the Conservation Land Trust, the property had been purchased and a ranger employed. In 1997, Pinalito was designated a provincial park and subsequently was incorporated into the "Green Corridor," a government-sanctioned habitat zone promoting conservation and sustainable development that cuts across the province from north to south.

The park is triangular in shape and extends to the Pepiri Guazu stream on the border with Brazil. To the north Pinalito borders land belonging to a logging company that has torn apart the native forest. To the south it borders another timber company, which has better managed its forest, maintaining habitat continuity through the biological corridor to the Yaboti Biosphere Reserve, a protected area of roughly 584,000 acres (236,000 hectares).

Pinalito is full of wildlife, with five species of feline (jaguarundi, ocelot, margay, oncilla, and puma)—the reason this tract of forest attracted the interest of the Cat Survival Trust. Pinalito is also a refuge for endangered species such as the red howler monkey, which is nearly extinct in Argentina, and the vinaceous Amazon, a colorful parrot whose existence is now threatened by habitat loss. Tree ferns are among the park's noteworthy plants, as are various unusual orchids and bromeliads, and Parana pine trees, which formerly covered areas of the Misiones high plains and are greatly diminished throughout their native range. In recent times, due to hunting and habitat fragmentation, the jaguar has disappeared from the area, but with a bit of time and good conservation policies, this large carnivore might one day resume its crucial role in the ecosystem. Pinalito represents the only high-altitude conservation area in the entire Misiones Province, thus serving a key role in ecosystem protection.

Pinalito's successful preservation is due largely to the tireless commitment of conservationist and neighbor Daphne Colcombet, and to Abel Gerber, the lone ranger with very special talents, who for a small salary manages to keep the park well protected. Both Daphne and Abel do everything they can to welcome visitors, host researchers, prevent timber theft, and ensure the park's borders are respected. After unending battles, they have become the best guardians of the forest and its diverse wildlife.

MELIMOYU

15,329 acres/ 6,206 hectares; tracts acquired 1999–2005
Project of Doug Tompkins and Fundacion Pumalin
Aysen Region, Chile

This region of coastal Chile located around latitude 44 degrees south is a complex coastal zone of canals and fjords, with many islands and amazing scenery. In most places, the evergreen Valdivian rainforest reaches the sea, and extends towards the interior of valleys and covers the hills of lower altitudes. Above them rises the Melimoyu Volcano, its summit and snow-covered flanks looming above the expansive green forest.

The military government in power during the 1980s carried out a colonization program for the Melimoyu area, after having annulled its status as Puyuhuapi National Reserve. After just a decade, only a few of the fifty families that had moved there remained. Through the years the Conservation Land Trust received many queries from potential sellers who had been part of the government's ill-conceived settlement program, and had tired of trying to earn a living in such a remote place.

Between 1999 and 2005, Doug Tompkins purchased three contiguous tracts along the Canal Refugio, a spectacular interior fjord. Although some of the property had been degraded by logging and cattle grazing, it had great conservation potential. The livestock were removed, and the land began to heal. The conservation area was significantly expanded with acreage that Fundacion Pumalin received from the Chilean government in a land swap; in exchange, Doug Tompkins donated a large block of land around the Melimoyu Volcano. Fundacion Melimoyu, a Chilean nongovernmental organization, has been pushing for expanded protections for the greater Melimoyu area, ideally the creation of a future Melimoyu National Park. If that idea succeeds, these already assembled conservation lands in the area would be donated for inclusion in the new park.

ISLA MAGDALENA

5,350 acres/,2166 hectares; tracts acquired 1993–1999
Project of Doug Tompkins
Aysen Region, Chile

Isla Magdalena is a large and lovely island along the remote southern coast of Chile near Puerto Cisnes. The bulk of the island was protected as a forest reserve by the Chilean government in the 1960s, and was later upgraded to national park status in 1983. The park, which covers approximately 80 percent of the island, is wild and little visited. The national parks administration maintains no infrastructure or personnel there.

Private inholdings, mostly relatively small tracts owned by absentee landowners, cover the rest of the island. Between 1993 and 1999 Doug Tompkins acquired several of these inholdings for conservation. Six properties were subsequently donated to the state for inclusion in Isla Magdalena National Park. The remaining tract, Estero Pangal, which was purchased in 1994 and covers approximately 1,458 acres (590 hectares), remains in private ownership and is strictly protected for its wildlife habitat value.

The growing complex of protected areas in this part of Chile is a model for other nations to emulate. If a future Melimoyu National Park can be established, a string of wilderness jewels would dot the coast: Isla Magdalena, then Queulat National Park just to the east across Canal Puyuhuapi, then Melimoyu National Park immediately to the north across Canal Jacaf, with Corcovado National Park and Pumalin Park a short distance northward along the coast. This extraordinary system of wilderness parks safeguards an irreplaceable part of Chile's national heritage, supports thriving wildlife populations, and is increasingly a magnet for adventure travelers.
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CANI SANCTUARY

1,294 acres/ 524 hectares; acquired in 1989
Project of Lahuen Foundation with
support from Doug Tompkins
Araucania Region, Chile

The Cani Araucaria Sanctuary, in the Araucania region of central Chile, is modest in size, but it is noteworthy as an exceptional example of an old-growth Araucaria forest natural community, and also as one of the first privately funded protected areas in Chile. The Lahuen Foundation was formed in 1989 to acquire the initial properties for the Cani; the Conservation Land Trust later assisted in expanding the reserve.

A group of wildlands philanthropists including Alan Weeden, then-president of the Weeden Foundation, Yvon Chouinard, founder of the Patagonia clothing company, and Doug Tompkins were invited by Ancient Forest International to join Chilean conservationists (and Lahuen board members) Adriana Hoffmann, Manfred MaxNeef, Sergio Vergara, Nicole Mintz, and others to purchase and formally protect this native forest remnant. Other donors in Chile and the United States also contributed, and the Cani Sanctuary soon became Chile's premier native forest education project.

Roughly thirteen miles outside the popular resort town of Pucon in the northern reaches of South America's temperate rainforest region, the Cani Sanctuary sits at one of the highest elevations in an active volcanic landscape. "Cani," which means "the vision that transforms" in the native Mapuche language, is a lagoon-studded, verdant, collapsed caldera ringed by rock towers and filled with cathedral-like primary forest, home to many rare animal and plant species. The Araucaria, or monkey-puzzle pine, is a relict, a coniferous holdout in a hemisphere where the forests have long since evolved to broadleaf species. Along with the ginkgo, it is thought to be the arboreal species with the most ancient lineage. Surviving almost unchanged for nearly a quarter-billion years, this marvelous tree from Jurassic times lives on in the Cani, which provides an inspiring setting for environmental education.

Why National Parks?

The American writer Wallace Stegner famously described national parks as "the best idea" America ever had. That wonderful innovation—places that represent the diversity of a country's natural heritage, that prevent exploitative development and allow natural processes to flow unimpeded, and that provide opportunities for families to enjoy the wonders of nature—is today a global phenomenon. From its birth at Yellowstone in 1872, the national park idea has spread around the Earth, with roughly a hundred countries having protected areas of that designation, in total representing thousands of wild places bequeathed to the future.

Argentina and Chile both have a proud tradition of establishing national parks: Argentina's first national park was created in 1903, Chile's in 1926, and every full-term Chilean president since has expanded the park system. Images from those countries' most beloved natural areas, Iguazu Falls in Argentina and Torres del Paine in Chile, are as recognizable to Argentines or Chileans as photos of the Tetons or Yellowstone are to Americans. These images of national parks become a shared cultural touchstone, part of the iconography that helps hold a society together.

As in the United States, government funding in Chile and Argentina for parks creation, expansion, and stewardship has been inconsistent, and private philanthropy offers an effective tool for parklands expansion. The Conservation Land Trust and Conservacion Patagonica have focused on creating national parks because of the values they provide—ecological, cultural, spiritual, recreational—and also because of their permanence. National parks are the best-known and most durable way to preserve public land, having a successful track record approaching 140 years. While not a perfect or universally applicable conservation tool, national parks tend to be extremely popular and an effective way to link a society's land base with people's sense of national identity and patriotism. History suggests that there is no better way of fostering a culture of conservation than providing opportunities for citizens to experience—and thereby grow to love—the wild world by visiting their national parks.



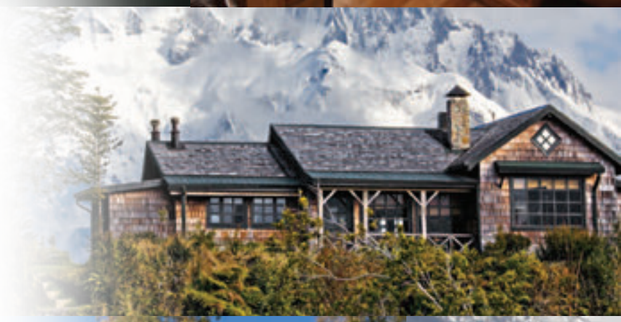



Public Access Infrastructure

Building the infrastructure for a new national park must be done with great care. Campgrounds, visitor centers, road and trail networks, signage, and other facilities should be designed to minimize impacts on the landscape's natural qualities, while offering a first-class visitor experience. Pumalin Park and the future Patagonia National Park are spectacular wilderness areas in the tradition of Yosemite and Torres del Paine national parks; they attract visitors from around the globe and are intended to be the premier showcases for Chile's wild character in the decades and centuries to come.

While creating these new protected areas in southern Chile, tremendous effort has gone toward assuring the aesthetic quality of park infrastructure. Good architecture in a national park can elevate the visitor experience, communicate that a society values its natural heritage, and promote the idea that beauty in all its forms—natural and human-created—truly matters. Conversely, bad architecture degrades the visitor experience, and implicitly communicates that aesthetics are of little concern and parkland protection is unimportant. Creating park buildings that reflect the vernacular architecture of a region, that use local materials, and display fine craftsmanship reinforces the sense of permanence conservationists place on national parks as sanctuaries of beauty and wildness. It is also a proven conservation strategy for gaining popular and governmental support. Making new parks attractive to visitors, especially young people, is one important way to build a culture of conservation throughout society.

All of the public access infrastructure at Pumalin, the future Patagonia National Park, and other parkland projects in Chile and Argentina initiated by the Conservation Land Trust, Conservacion Patagonica, and Fundacion Pumalin reflects a commitment to durability, localism, and sustainability. Structures are designed to require minimal inputs of outside energy for maintenance, and often incorporate renewable energy production. Following these standards is expensive initially but an excellent investment over time. Just as today visitors may appreciate outstanding examples of historic architecture in Yosemite or Glacier national parks in America, a century hence visitors to Patagonia National Park, Pumalin Park, and, hopefully, a future Ibera National Park, will experience big, beautiful, wild landscapes where the built environment contributes to the health, appreciation, and conservation of the natural world.







Parklands Stewardship

Establishing protected areas, whether through governmental or citizen action, is just the first step toward perpetual conservation of a landscape. The problem of "paper parks," designated protected areas without effective conservation protections in practice, exists in developing countries around the globe. And even in overdeveloped countries with well-established systems of public lands, including the United States, agencies often fail to protect conservation lands from motorized recreation and other abuses. Effective, durable structures for administration, maintenance, and stewardship must be developed for protected areas, and where public access is welcomed, a competent ranger corps is necessary to interpret the natural values of the place, serve visitors, and deter illegal uses.

At three major parkland initiatives created by the Conservation Land Trust and Conservacion Patagonica—Pumalin Park, the future Patagonia National Park, and Ibera—considerable attention has gone to developing excellent administrative and ranger personnel. These teams of dedicated conservationists are in large part responsible for the success of the projects. One innovation has been to think beyond the traditional idea of what constitutes a ranger. Typical duties such as patrolling the park and helping campers must be performed, but all of the Pumalin area farms and ranches owned by Doug and Kris Tompkins [see Part 4] also serve as de facto ranger stations. In the Pumalin area, strategically located farms around the park act as a bulwark against timber theft and illegal settlement, and workers there can help monitor activities of the industrial salmon farms that are polluting nearby fjords.

In the Ibera marshlands of northern Argentina, the ranches that surround conservation areas form buffer zones, where workers help spot and report illegal activity in the wetlands. The ranger team works closely with provincial authorities, lends technical support to communities, and has built a new ranger station in the Ibera Natural Reserve. Because of the marshlands' vastness, rangers there employ small planes to monitor illegal incursions, which include illegal water diversions for rice farming and illegal road construction through the wetlands.

In Chile's Chacabuco Valley, when Conservacion Patagonica purchased a large private ranch to become the heart of the future Patagonia National Park, the gauchos who had tended the livestock were invited to stay on, transitioning to jobs in ecological restoration and park ranger work. Arcilio Sepúlveda, who formerly had been a shepherd and *leonero* for the ranchers in the valley—the person responsible for capturing and killing mountain lions—is today a park warden who oversees the puma tracking program. He is among many local residents learning new livelihoods related to the conservation future of the area.

PART 2

LANDSCAPE RESTORATION

Restoration is about accepting the brokenness of things, and investigating the emergent power of healing. It's the closing of the frontier—ceasing our demand for open land to "develop"—and the reinhabiting of exploited or abandoned places. Facing these necessities and doing the work liberates human energy: yields a bounty of knowledge and satisfaction, and a resurgence of wild Nature.

—Stephanie Mills

LANDSCAPE RESTORATION

Helping Nature Heal

As a scientific discipline, the field of ecological restoration is relatively young, but the healing powers of nature are literally older than the hills. And those healing powers are amazing—landscapes badly damaged by past land-use practices often show remarkable resilience if exploitative activity is ended and natural processes are given freedom to begin the work of recovery. The key, of course, is to rush the sick patient to the hospital: that is, begin active or passive restoration before species go extinct.

In a world as degraded as the one modern humans are making, ecological restoration is a necessity. Everywhere there are opportunities to help wounded landscapes return to health by protecting habitat, removing nonnative species, reintroducing missing wildlife (including keystone species such as large carnivores), repairing overused landscapes, and helping natural processes resume operating at a landscape scale. This idea of ecological restoration writ large—moving from a focus on isolated sites to functional ecosystems—has come to be known as *rewilding*. But while the goal of rewilding is to put missing pieces and processes together and then get out of nature's way, the means to this end may include active restoration techniques and ongoing monitoring. Site-specific activities such as countering hillside erosion or rehabilitating a former gravel pit are small, incremental steps toward this larger vision of restored beauty and health.

At the Conservation Land Trust's flagship parklands projects in Chile and Argentina, and at Conservacion Patagonica's future Patagonia National Park site in Chile, landscape restoration projects are combining conservation science, passion, staff and volunteer labor, and creativity in the service of wilderness recovery. The specific techniques are unique to place: in the Valdivian rainforest it may be putting a central actor, the alerce tree, back into the system; in a grassland system, it may mean getting the base level productivity of the ecosystem back into good shape so that herbivores such as pampas or huemul deer can flourish, and then providing the ecological and sociological conditions for their predators to also thrive. In every case, the approach is one of humility, assuming not a managerial mindset but a cooperative one, and the overarching goal is restoring beauty and ecological integrity—a system that can perpetuate itself over time and allows for evolutionary processes to continue.

Alerce 3000
Forest Restoration Project

The Alerce 3000 restoration project complements the Conservation Land Trust and Fundacion Pumalin's efforts to restore and protect the native Valdivian rainforest of southern Chile. One of Earth's few temperate rainforests, with high floral biodiversity and endemism, this natural community has suffered from a century of clearing, burning, and logging. The Alerce 3000 program includes a native tree nursery, which raises over twenty species, and a field reforestation program, which plants and monitors restoration areas. The project helps recreate species diversity of the native forest, focusing particularly on its namesake tree, the magnificent but endangered alerce (*Fitzroya cupressoides*).

One of the largest and oldest species on Earth, the alerce can reach 200 feet in height and 16 feet in diameter. Scientists estimate that some individual trees are more than 4,000 years old. Logged heavily for more than three centuries for its rot-resistant wood, the alerce survives in only a few stands in isolated areas of its historical range. More than 80 percent of the remaining alerce forests are on private lands, contributing to the difficulty in conserving this species. Strictly protected (officially) since the 1970s, in practice the trees have only weak legal safeguards; Chile prohibits cutting live alerce trees, but allows the milling and sale of dead trees, thus encouraging poachers to kill alerces and later return to harvest the lumber. CONAF, the national park administration, lacks the personnel and resources to fully protect the species. Thus, the farms and guard stations around Pumalin Park are key to deterring poachers. The project is a paragon of long-term thinking: the name "Alerce 3000" recognizes that restoring these giants of the forest and the vibrant diversity of the native Valdivian temperate rainforest may take a millennium.

The Alerce 3000 program's native tree nursery, the first of its kind in Chile, is based at the Vodudahue farm. Seeds collected from various species in the nearby forest are germinated and grown into seedlings suitable for transplant. Notably, the seeds are carefully tracked so that alerce seedlings used for replanting in a particular valley are grown from seeds collected in that same valley, thus continuing the unique genetic legacy established there. In recent years, the nursery and its greenhouses have contained upwards of 100,000 plants in various stages of growth, including ulmo, Guaiteca cypress, canelo, and tepa trees. A companion reforestation program determines which areas of forest to target for restoration, focusing on areas of past human settlement where logging and land clearing for agriculture have degraded the forest ecosystem. This visionary initiative, which includes consulting scientists and university students doing internships, is building a base of knowledge about forest restoration invaluable for future conservation work within and beyond the Pumalin Park region.

Grasslands Restoration in the Chacabuco Valley

Restoring the ecological health of the Chacabuco Valley's grasslands is one of the central goals of the Patagonia National Park project. Located in a transitional area where southern beech forests meet the Patagonia steppe ecosystem, the valley is of crucial biological importance because it retains its full complement of native wildlife, including large herbivores such as guanacos and the endangered huemul deer. Protecting these species for the long term requires restoring the overgrazed, degraded grasslands to productivity.

The economic transition from sheep ranching to conservation began when Conservacion Patagonica purchased a large private ranch, Estancia Valle Chacabuco, in 2004. All but a few of the former estancia's 30,000 sheep and 3,800 cattle were sold, with the dispersal taking place over four years so as not to distort the local livestock market. Eighty years of overgrazing the valley's fragile grasslands, which were not well suited to raising livestock, had created a patchwork of invasive species, poor grass, and barren areas. Under the direction of a restoration ecologist, a recovery program was implemented, with initial efforts beginning in 2005.

Soil sampling indicated what level of restoration was needed for different areas. Research plots have been established and monitored to test the effectiveness of reseeding and other erosion control practices. With livestock gone and natural recovery of the grasslands accelerating, an ongoing project to collect seeds from native grasses, especially the coiron species, has provided material for reseeding heavily damaged areas. Seeds of the three dominant tree species in the southern beech forest ecosystem are being collected to aid in reforestation efforts. Various erosion control techniques, including using mesh netting to stabilize soil on steep hillsides, have begun to reverse the damage caused by overgrazing and ill-considered roadbuilding. Unusable remnants of ranch infrastructure such as barns, sheds, corrals, etc. were removed to bring back beauty to the landscape. And in the most visible element of the work to recover the valley's wildness, during 2005–2010 volunteers from around the world have torn down hundreds of miles of ranch fencing, allowing wildlife freedom to roam throughout the area. While the full recovery of the Chacabuco Valley's ecological integrity will take decades, the initial five years of restoration work have produced significant, tangible progress toward healing the land and bolstering wildlife, leaving project biologists pleasantly surprised with the speed of recovery.

Grasslands Restoration in the Ibera Region

Although much of northern Argentina's 3.2-million-acre Ibera Natural Reserve remains in excellent health, a host of negative influences—from certain local ranching practices to global climate change—affect the long-term integrity of the region, a landscape of expansive grasslands and one of Earth's greatest freshwater wetlands. Many areas of the watershed have suffered from poor livestock management and overgrazing, habitat conversion, disruptions to the original hydrology, and spread of nonnative species. Populations of some native animals, including jaguars, have been eliminated or severely reduced since European settlement of Corrientes Province.

Since the Conservation Land Trust began biodiversity conservation work at Ibera in the late 1990s, a large-scale, long-term grasslands restoration program has been underway. Conducted on numerous properties throughout the vast Ibera watershed, initiatives include restoring grassland productivity, controlling exotic species, and returning missing species to the ecosystem. Landscape restoration work focuses on undoing prior damage from overgrazing, agriculture (especially industrial rice farms), and industrial monoculture forestry plantations. Where overgrazing had created poor grasses and allowed proliferation of termite mounds and ant hills, CLT has employed various approaches to improve cattle management, from total exclusion in certain areas to carefully managing grazing pressure through lower stocking rates and pasture rotation.

Controlling nonnative animals such as feral pigs, European boars, water buffalo, and axis deer, and eliminating exotic plant species such as Chinaberry, ligustrina, and various grasses and herbaceous plants that have escaped from agricultural cropland, is an ongoing challenge. Where rice cultivation has disturbed hydrology and damaged soils, CLT has filled in irrigation channels and and removed rice dykes, and is exploring several techniques for restoring soil fertility. Where monoculture plantations of nonnative pine and eucalyptus once stood, CLT is working on restoring grasslands and establishing habitat corridors. Controlled burning has been employed as a tool to help return the grasslands to a more natural fire regime. Throughout its ambitious ecological restoration program, CLT biologists and outside experts who consult with the project are constantly assessing and improving their techniques to inform future land management and biodiversity protection practices.




Restoring Roadsides and Road Cuts

Few scientific insights from conservation biology are more clear than the fact that roads are daggers into the heart of wilderness: when wild country is penetrated by a road the result is habitat loss and fragmentation, a conduit for invasive species, and an invitation for humans to overexploit nature's riches. The best antidote to these problems is, of course, not to build new roads into wilderness areas at all, but conservationists in various parts of the world are also developing successful techniques for removing and revegetating former roads.

As just one example of several such efforts at the Tompkins-owned farms near Pumalin Park, workers at Las Lomas farm outside the village of El Amarillo have rehabilitated an eroding road cut [see photo series above], healing the previous damage and gaining useful restoration experience.

Where roads are needed to link human communities, however, they should be well designed and aesthetically pleasing. In southern Chile, roadbuilding contractors typically leave an ugly mess along the roadside. The Conservation Land Trust has developed expertise for roadside cleanup along public roads within and near the parklands it creates. The CLT-funded roadside improvement around Pumalin Park [photo series below] sets a standard for government agencies to follow in their roadbuilding contracts, and helps support local pride and ecotourism.

The Pumalin Park project also has a staff position devoted exclusively to roads: Lorena Valenzuela works closely with Chile's Ministry of Public Works, advocating that government agencies follow similar guidelines and make contractors follow high standards in the cleanup and visual appearance of roads following construction. As of 2010 this work is ongoing, and CLT and Conservacion Patagonica are working with fellow conservationists and local business leaders to develop a future campaign calling for the national government to designate the entire Caraterra Austral, Chile's southern highway, as a National Scenic Highway. The goal would be to improve the scenic quality of the highway, enhance tourism, and boost local economies.



Chaiten Volcano Eruption and Response

In May 2008, the Chaiten Volcano, previously dormant for more than 9,000 years, burst into a massive eruption. Located on the flank of the Michimahuida Volcano in the heart of Pumalin Park, the Chaiten Volcano and the flooding it produced devastated the nearby town of Chaiten and southern areas of the park. It spewed hundreds of thousands of tons of volcanic ash into the air, created a dramatic mushroom cloud, and affected commercial airline traffic as far away as Uruguay. Although no one died as a result of the eruption, damage in the town of Chaiten was catastrophic: rainfall following the eruption carried tons of ash, which changed the course of the Rio Blanco and caused massive flooding and infrastructure damage. The community, previously the largest in Palena Province, had to be evacuated. Due to continued volcanic activity, the Chilean government decided to pay reparations and permanently resettle the people of Chaiten instead of rebuilding the town. Although the Pumalin Park office and visitor center were left relatively intact, the destruction of the surrounding town made it necessary to close and dismantle those facilities, with their materials to be reused for future buildings.

Within Pumalin Park, the El Amarillo sector at the southern entrance experienced the greatest damage. Just months after a major landscape restoration project there had been completed, the eruption covered the area in several feet of volcanic ash. Closing the park to the public for the 2008–2009 and 2009–2010 seasons permitted park employees to concentrate their efforts on the immense task of repairing damaged infrastructure and assisting natural recovery. Repeated cycles of disking ash-covered fields allowed the area's heavy rains to progressively wash away ash until only a small quantity remained, which could be turned over into the soil and reseeded. Campgrounds had to be dug out and repaired. Ash-filled rivers had altered course and washed out large sections of road, which required complete rebuilding. As of 2010, the repair effort continues as the public road between Caleta Gonzalo and Chaiten remains impassible in several sections, but after two years of intense work, the process of restoring the park is near completion. Plans for a new visitor center and administrative office in El Amarillo to replace the facilities previously in Chaiten are well underway. Although the Chaiten Volcano remains somewhat active, the park is likely to again welcome visitors for the 2010–2011 season.

PART 3

WILDLIFE RECOVERY

Wilderness without wildlife is mere scenery.

—Lois Crisler











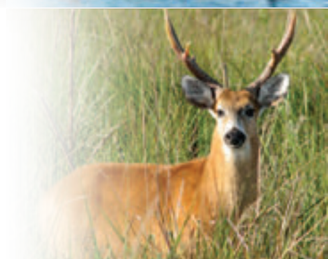
WILDLIFE RECOVERY

Restoring Missing Creatures

More than sixty years ago, the pioneering American conservationist Aldo Leopold advocated for preserving wilderness areas because of their cultural, recreational, scientific, and ecological benefits. At a time when protected areas, most notably national parks, were still valued primarily for their scenery, and often managed in ways that compromised ecological integrity (elimination of predators, for example, was officially sanctioned by various federal land management agencies including the National Park Service), Leopold articulated the importance of wilderness areas to maintain their "distinctive faunas," including carnivores.

The modern scientific disciplines of conservation biology and landscape ecology have built on foundations laid by Aldo Leopold and other early ecologists who came to view natural systems holistically, who saw that the workings of a forest or grassland depend on the complex interactions of soil, climate, natural processes, and the relationships of all the native creatures, not just organisms valued by people for economic or aesthetic reasons. A growing body of research confirms the critical role that large carnivores play as keystone species in both terrestrial and marine environments.

The areas where the Conservation Land Trust, Conservacion Patagonica, and colleagues have focused their land conservation work during the past twenty years are generally wilder and more intact than most parts of the temperate world. But in every parklands conservation project undertaken, the landscape was not fully healthy: some native species were missing or persisted at population levels far lower than presettlement conditions, or natural processes were compromised by human activity, or the land was scarred from past exploitation. Reassembling all the pieces of a healthy ecosystem is the top priority. Informed by the latest thinking in conservation science, teams of biologists are working toward this goal by restoring missing wildlife to the landscape in various projects stretching from northern Argentina to southern Chile.













Giant Anteater Reintroduction

In Corrientes Province of northeastern Argentina, a vigorous, multipronged effort to expand protections for the Ibera marshlands—one of Earth's great freshwater wetland and grassland ecosystems—has been underway since the Conservation Land Trust began purchasing degraded ranchland in the watershed in 1997. Besides acquiring land, CLT has launched initiatives for habitat restoration, public outreach and education, legal defense, and scientific research and monitoring. As part of the overarching effort to restore and protect the Ibera ecosystem, CLT has established an unprecedented program of wildlife recovery that seeks to return extirpated natives back to their former territory in the region. These ecologically significant extirpated mammals include the giant anteater, pampas deer, jaguar, giant otter, and collared peccary.

In 2005 CLT biologists prepared a recovery plan for the giant anteater in Ibera. Once widely dispersed across Corrientes Province, the species has been locally extinct since the 1950s. The plan was approved and launched as a joint initiative with the provincial wildlife authority. As the first-of-its-kind species reintroduction effort in Argentina, obtaining federal permits and permissions from other provincial governments to allow translocation of anteaters from existing populations was a major challenge. After these agreements were in place, the authorized translocation of giant anteaters began. Individuals are initially quarantined at a special facility close to Corrientes City overseen by wildlife veterinarians Gustavo Solís and Javier Fernandez, and then habituated before release into the wild at Rincon del Socorro.

More than twenty giant anteaters have come through the program, which is ongoing. Young have been successfully bred in captivity, and eight anteaters have been released and are living in the wild. The year 2009 saw the first giant anteater born in the wild marshlands of Ibera after decades of absence. Released anteaters are adapting extremely well to their new habitat, with a survival rate similar to other populations of large mammals that are well protected and increasing in numbers. Although the giant anteater was previously an almost unknown creature for local people, the reintroduction program's results and publicity have been so positive that most Ibera residents now highlight the species as one of the region's most loved inhabitants. The project has received extensive regional and national media attention, and is intended to inspire similar endangered species recovery initiatives elsewhere in Argentina.

Pampas Deer Reintroduction

The pampas deer, a small cervid native to South America, was formerly abundant from central Argentina to Brazil. Prior to European settlement, millions of deer occupied the pampas, or grasslands, region of Argentina. Centuries of hunting by humans and agriculture-related habitat change have reduced the pampas deer in Argentina to an endangered species; only four isolated populations totaling less than 3,000 individuals remain in existence. Corrientes Province holds the second largest of these populations.

Starting in 2006, Conservation Land Trust biologists have conducted systematic censuses of pampas deer around the Ibera Natural Reserve, which is comprised of provincially owned public land and private land in the Ibera watershed. This research revealed that the species is extirpated in the reserve, and found only on private cattle ranches near it. A key threat is the continuing loss of grassland habitat as forestry companies convert local ranches to nonnative pine plantations. In collaboration with other nongovernmental organizations including Flora y Fauna Argentina, the Conservation Land Trust has created a 1,322-acre (535-hectare) reserve for pampas deer near the Ibera Natural Reserve, and is also working to reestablish the species within the protected area.

Toward that end, in 2009 biologists relocated deer to Estancia San Alonso, a 26,000-acre ranch deep in the heart of the Ibera reserve purchased by the Conservation Land Trust in 1997. As of 2010 there are four female and two male deer living freely at San Alonso, in what constitutes the fifth population in Argentina and the largest reserve for pampas deer in the country. This year also marked a major milestone in the reintroduction program, with its first pampas deer fawn born in the wild; CLT has also been authorized to translocate an additional six deer into the field. By the end of 2011, a target population of 40+ individuals is expected. These are just the beginning steps of a long campaign to create a self-sustaining population and help pampas deer recover throughout the Ibera region and across their native range. Achieving that goal will depend on biological and cultural factors, and CLT is working on both, complementing its direct wildlife and habitat protection work with outreach to local landowners, which helps increase awareness about the deer's precarious situation and promotes management techniques that increase deer survival while maintaining economic productivity.

Huemul Deer Recovery

The huemul deer, a wildlife icon in Chile that is featured on the national shield, was once widely distributed along the southern Andes of Chile and Argentina. With its short legs and stocky build, the deer is well adapted to the rugged and forested mountainous terrain of Patagonia, and historically occupied habitats from the coastal lowlands up to 5,500+ feet (1,700 meters). Overhunting and loss of habitat due to the conversion of lowland areas to agricultural production are key factors behind the species' decline. Predation by domestic dogs and introduced diseases from domestic livestock have further threatened the remaining huemul populations. Now highly endangered, no more than 2,000 individuals remain on Earth in scattered populations. Threats to remaining huemul deer habitat are increasing, especially from mineral and energy development projects in Patagonia.

When Conservacion Patagonica launched the Patagonia National Park effort by purchasing the private ranch that would become the heart of the park, one of the primary motivations for the project was to expand protected habitat for the critically important population of huemul deer occupying areas along the northern shore of Lago Cochrane and neighboring Tamango National Reserve. The Valle Chacabuco/Tamango population is an estimated 120 individuals, a significant percentage of the species' total numbers. When completed, the new park will cover roughly 650,000 acres of wild grasslands, forest, and mountains, dramatically increasing the permanently protected and connected habitat for these deer.

With the species' fate hanging in the balance, and each remnant population of huemul being crucial to preserve and augment, it is necessary to understand the deer's ecology, population status, current threats, and the limiting factors for the species' recovery. Conservacion Patagonica is funding and managing a program to track adults and fawns through radio telemetry in order to understand the deer's survival rates, population trends, and social behavior. The knowledge gained should be useful to develop strategies for huemul management and recovery, with a long-term objective of restoring populations across the species' former range and returning this iconic animal to its rightful place of prominence in the forests and mountains of Patagonia.

Puma Research and Conservation

The most widely distributed feline in the Americas, with a historical range stretching from the Magellan Strait in Patagonia to the Yukon Territory in Canada, pumas have long been revered as totem animals representing strength and cunning. They also have been long persecuted by humans who considered them a threat to livestock and humans. A recent insight from conservation science is that pumas and other large carnivores are vitally important as "top predators," the creatures at the top of the food chain that help keep an ecosystem in balance by regulating the abundance of herbivores and mid-sized carnivores. Diminished from their presettlement numbers and distribution, pumas have changed their predation habits due to the introduction of exotic prey such as European hares and sheep. Despite these changes, the recovery of healthy ecosystems will only occur in areas where top predators are retained as part of the system. Creating secure habitat for pumas and understanding how they interact with other species has been among the top conservation priorities for Conservacion Patagonica.

In the Chacabuco Valley, site of the future Patagonia National Park, a team of biologists and park rangers are tracking pumas with GPS collars to understand their choice of prey, hunting methods, and interactions with the landscape. The effort is funded and managed by Conservacion Patagonica. This scientific study will determine what effect, if any, predation by wild cats is having on the endangered huemul deer in the valley, an important question considering the area's recent land use changes—from ranching with more than 25,000 sheep and active predator control, to a conservation area with very few domestic animals that forbids puma hunting.

When Conservacion Patagonica purchased a large historic sheep ranch to begin the Patagonia National Park effort, the livestock were sold and ecological restoration projects commenced. Gauchos who had formerly tended sheep and cattle were offered jobs as park rangers, helping to transition the landscape from extractive to restorative purposes. The puma monitoring project's head tracker was for many years a professional hunter who killed the wild cats that ranchers feared as a threat to their livelihood. He now uses his skills and experiences in the service of conservation.

Conservacion Patagonica has also begun a program to train dogs to guard livestock against predators including pumas and culpeo foxes. Although not traditionally used for this purpose in Patagonia, guard dogs like Pyrenees and Maremmas have been used to deter predation in many parts of the world. If the project proves successful, Conservacion Patagonica will provide expertise to neighboring ranchers and local authorities to help reduce conflicts between livestock and wild predators.

Wildlife Recovery at the Future Patagonia National Park

Building on its work to restore thriving populations of huemul deer, guanacos, and pumas in the Chacabuco Valley of Chile's Aysen region, the Conservacion Patagonica wildlife recovery team is planning a series of monitoring and recovery projects. The conservation blueprint for the future Patagonia National Park calls for compiling baseline information on populations of scarce and little-studied species, which will inform future conservation strategies. At the top of the list of native species planned for further scientific study is the imperiled and poorly known austral mountain vizcacha, a close relative of chinchillas.

The vizcacha is a large, vocal rodent that dwells in harsh, rocky environments and lives in substantial colonies separated into individual family units. Because of Conservacion Patagonica's park effort, the Chacabuco Valley is one of the few areas in Chile where an existing population is well protected; the distribution range of this species is quite small and remaining populations appear to be highly fragmented in the few areas of Patagonia where they persist.

Another critical species that recovery efforts will target is the lesser or Darwin's rhea, known colloquially as the nandu, which is a large flightless bird native to the grasslands of Patagonia. The greater rhea and lesser rhea are ostrich-like birds endemic to South America; they attracted Charles Darwin's attention when he visited the Atlantic coast of Argentina while serving as naturalist of the HMS Beagle. The two rhea species have overlapping ranges, and prompted Darwin's early thinking about species descending, with variation, from a common ancestor, part of the foundation for his later treatise on natural selection. Lesser rhea numbers have declined in recent decades, and the Chacabuco Valley has one of the two known populations of the species in the Aysen district. Conservacion Patagonica's research program seeks to better understand the rhea's ecological relationships and current threats, and take actions to ensure the recovery of its population in the area.

Other species recovery projects planned for the future will target two species of small felids, the Geoffroy's cat and pampas cat; various native freshwater fish including inhanga and perch; and several species of threatened waterfowl. All of these wildlife recovery projects will carefully monitor the effect of changing population numbers on the ecosystem.

Future Wildlife Recovery Projects

ARGENTINA

The endangered species program run by the Conservation Land Trust–Argentina and headquartered at Rincon del Socorro in Corrientes Province is preparing for several wildlife recovery initiatives. The CLT team expects to continue translocating giant anteaters and pampas deer until self-sustaining populations are established, while drafting recovery plans and continuing outreach activities that prepare for an even-more ambitious goal: returning jaguars and giant otters to the Ibera region.

Jaguars are the traditional top carnivore in the Ibera marshlands ecosystem but have been eliminated by continuous persecution since settlers brought agriculture to the area. As in ranching cultures across the Americas, carnivores generally are not valued among the rural Argentine population, so any future reintroduction effort for jaguars would face opposition unless anti-predator attitudes can be softened. CLT–Argentina has begun outreach projects to communicate the jaguar's ecological value, building on the success of the poster and eco-education campaigns that accompanied the giant anteater reintroduction program. CLT biologists have visited jaguar conservation projects in Brazil and are developing organizational expertise and knowledge about the species. Translocating giant otters from existing source populations poses a different but formidable set of challenges, and will take extensive planning and coordination between biologists in multiple countries.

As the CLT team is restoring lost species to the ecosystem, it is also working to eradicate or control invasive exotic mammals such feral pigs, water buffaloes, and axis deer, and several species of trees and bushes. This ambitious ecological restoration program includes continuous assessment of management decisions in order to learn and adapt future restoration actions. Understanding how cattle grazing and wildfire—a natural component of local grasslands that has been altered by humans for centuries—interact and affect habitat quality for sensitive species is also top priority.

Ongoing ecological research is also helping to identify rare species that were considered extinct in the region and are now appearing in CLT reserves, and to assess the status of other threatened animals such as the maned wolf, marsh deer, pantanal cat, crowned eagle, and the strange-tailed tyrant, a native flycatcher with a strikingly long tail. While this work has only begun recently, conservationists already see promising signs that putting missing species back into the system, removing damaging uses, restoring natural processes, and continuing to protect additional habitat are the ingredients in the recipe for making the Ibera landscape healthy into the future.

PART 4

ECOLOGICAL AGRICULTURE

We stand, in most places on Earth, only six inches from desolation, for that is the thickness of the topsoil layer upon which the entire life of the planet depends.

—R. Neil Sampson

ECOLOGICAL AGRICULTURE

Restoring Degraded Farmlands and Cultivating Beauty

During nearly two decades of conservation work in South America, Kris and Doug Tompkins and colleagues have focused primarily on preserving wildness and biodiversity by creating new national parks and other protected areas. But a strong complementary area of work has focused on restoring damaged agricultural landscapes, particularly where well-managed farmlands could serve as parkland buffers or demonstrate more ecologically minded management practices to other landowners. Guided by the principle of "conservation as a consequence of production," these farms demonstrate the possibility of producing food while supporting the health of the surrounding ecosystem. The Tompkinses have acquired, with personal funds, some two dozen different farms and ranches. In addition, the Conservation Land Trust and Conservacion Patagonica have bought several other agricultural properties in cases where the lands are to be integrated into parkland projects.

Whether small farms in southern Chile or large ranches in northern Argentina, the acquired properties have been, in almost all cases, significantly degraded by past farming practices. As land abuse is ubiquitous, there is ample opportunity for collaboration with natural processes to rebuild soils, stop erosion, and expand diversity in the agricultural landscape. Buying abused agricultural land provides an opportunity to restore and redesign the farm or ranch for productive uses, apply a diversified, organic management regime, and create both ecological and social benefits. The result is jobs for people, useful products for the community, and, hopefully, a deeper agrarian ethic instilled in the broader culture.

"Restoration is a passion for us," says Doug Tompkins, "and brings enormous satisfaction—it is a way of putting one's land ethic into action, and demonstrating social responsibility that hardly can be topped." A successfully restored farm is not theoretical; it is a tangible example for all to witness. The restoration effort often stimulates nearby landowners to improve their management practices. Restored landscapes are not only good for the soils, water, forests, and flora and fauna of the place, but restoration also brings back the beauty that was compromised or absent before. With beauty comes pride of place and the will to defend one's home region against the recurrence of abuse and future threats. Each of these farm restoration projects reflects the idea that there is an urgent ecological and social imperative to help damaged lands return to robust good health.

RENIHUE FARM

1,749 acres/708 hectares; acquired in 1991
Project of Kris and Doug Tompkins
Lakes Region, Chile

Situated in the valley between the Negro and Renihue rivers in the Renihue Fjord of southern Chile, this 1,749-acre farm was the first agricultural property in South America bought by Doug Tompkins. He purchased it in 1991 from a Swiss family, which had bought the farm from the original German settler who founded it in 1935. When acquired, the farm was in bad shape, with massive erosion scars from cattle, burned-out areas of forest, and degraded pastures. After nearly two decades, the farm is productive again, with pastures of healthy, nutritious grass for livestock. Around the edges of fields, once-burned native forests now thrive.

Renihue is the primary home of Kris and Doug Tompkins. Soon after purchasing the farm, Doug began transforming it into a model organic farm and beautiful place to live—a process he and Kris would replicate many times in later years with other degraded farms. To preserve the architectural integrity of the farm, several buildings were carefully renovated and rebuilt: the main farmhouse required two years of work, but emerged as a fine example of the regional Chilote architectural style. New farm infrastructure, from homes for employees to sheep barns and machinery sheds, complemented the style of existing buildings: simple, nonindustrial, and in tune with place. Built mostly of recycled wood from the surrounding native forest, both new and restored buildings feature local materials weathered by rain, wind, and sun. As on most farms in the area, the buildings use woodstoves for heat, hot water, and cooking.

Two organic gardens, with three woodstove-heated greenhouses, provide fresh vegetables year-round for the twelve farm residents and a steady stream of guests. Worm composting produces a rich fertilizer for the gardens. A flock of sheep and herd of cattle provide wool and meat. Apiaries and a small berry plantation contribute to the production of Pillan Organics, which markets honey and jam from the farming operations around Pumalin Park.

Because access is by air or sea only, an airstrip and hangar help keep the farm operations running. Renihue also acts as an informal park ranger station for the Renihue Valley, one access point for Pumalin Park. On clear days it enjoys spectacular views of the 7,887-foot snow-capped Michimahuida Volcano, the centerpiece of the park. The local forests contain a rich diversity of indigenous wildlife including pumas and pudu deer, and the waters of the fjord are home to dolphins, sea lions, whales, and many species of fish.

PILLAN FARM

1,216 acres/492 hectares; acquired in 1994
Project of Kris and Doug Tompkins
Lakes Region, Chile

Situated at the geographical center of Pumalin Park and the various nearby farms owned by Doug and Kris Tompkins, the 1,216-acre Pillan Farm between the Comau and Renihue fjords in southern Chile serves as the administrative headquarters for the park and several farms in the area, and also as the production center for organic honey and jams marketed by Pillan Organics.

All honey made in Pillan comes from beehives located on various Tompkins-owned farms around Pumalin and is derived from native flowering trees, making it completely natural and free from artificial chemicals. The honey-making facility extracts honey from hundreds of beehives, then purifies and bottles the product for sale throughout Chile and abroad. The jam-producing facility cleans the fruit grown on different farms and creates a range of jams including strawberry, blueberry, raspberry, gooseberry, murta, and red currant.

These small-scale, handmade products derived from crops that do not degrade the ecosystem—on the farm or beyond—help build a sustainable local economy. Besides the honey and jam operations, Pillan has small herds of sheep and cattle; as on other farms in the area, careful pasture management is critical to maintaining healthy grasslands, given the very high rainfall of 20 feet a year.

When purchased, Pillan had undergone its share of suffering: both cattle grazing and industrial salmon operations had abused the land and adjacent seascape, leaving serious impacts. With years of thoughtful work, however, the farm is returning from the dead. Pastures are verdant, native forests are healthy, and the infrastructure has received a major facelift. Most of the productive activity is concentrated in the middle of the farm's acreage, leaving 80 percent of its area in pristine condition, given over to wild nature and home to a rich variety of flora and fauna. Well-designed homes, built in a local style with recycled materials, have been constructed for park and farm employees. Pillan now is both productive and beautiful, enjoying sensational views of the Pillan Fjord, the snow-capped Michimahuida Volcano, and the high peaks between Huinay and Vodudahue.

VODUDAHUE FARM

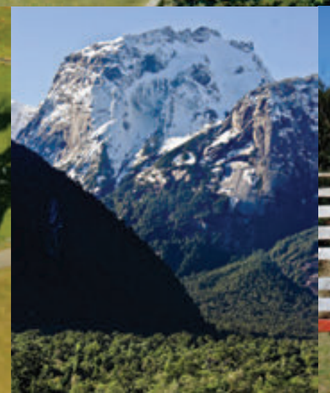
3,710 acres/1,502 hectares; acquired 1994–1999
Project of Kris and Doug Tompkins
Lakes Region, Chile

Nestled in the dramatic Vodudahue Valley extending from the Comau Fjord in the Chilean Lakes District, this farm has one of the most spectacular settings possible: the enormous granite faces towering above the valley have led visitors and locals to call it the "Yosemite Valley of Chile." Beginning in the seventeenth century, Jesuit missionaries crossed over the Andes by traveling through this valley. Centuries of human settlement and exploitation left the land in rough shape. Now, beneath the impressive mountains, the restoration of this once-degraded area is well underway. After fifteen years of work, Vodudahue has been transformed into an orderly, highly diverse operation dedicated to harmonizing production with ecology and conservation.

When purchased, the collection of valley farms that now make up Vodudahue were in shambles, scarred by erosion and littered with burned tree trunks from the shortsighted practices of settlers. Returning productivity, ecological integrity, and beauty to this farm required years of work restoring sheep pastures, rebuilding soil health, planting crops (primarily fruits) that can tolerate the high annual rainfall, and rebuilding infrastructure and housing. Because the farm is accessible only by air or sea and not by road, the restoration efforts focused on developing a self-contained farming operation using local materials.

Today the farm breeds high-quality rams specifically adapted to the local climate and pastures, while the orchards grow blueberries, raspberries, gooseberries, murta berries, and currants for use in locally made jam. A small garden provides fresh vegetables for those living on the farm. Apiaries round out the farm's diversified operations, producing honey and pollinating the orchards and grass fields. An innovative biostimulant program enhances the soil health of the berry plantations, pastures, and gardens. The farm also serves as an informal Pumalin Park ranger station, watching over the Vodudahue and Barcelo River valleys.

Since 1998, Vodudahue has been home to an innovative native species tree nursery that collects seeds from the surrounding forest, then germinates and nurtures young trees for use in reforestation efforts. Nearly two dozen native species emerge from its greenhouses, among them the threatened alerce trees. This program not only supports native forest recovery, but also provides the forestry students who intern there an opportunity to do hands-on restoration work and develop an appreciation for wild forests.



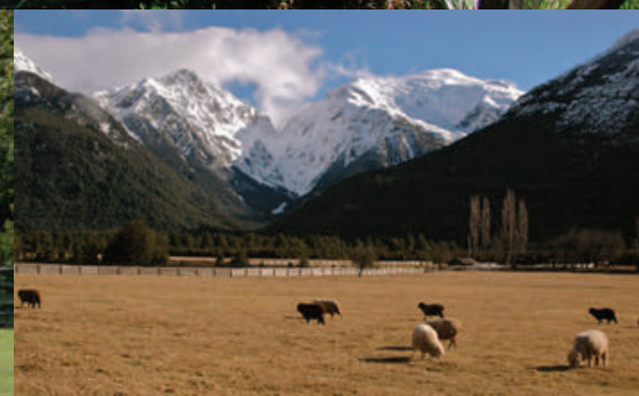
RINCON BONITO FARM

526 acres/213 hectares; acquired in 1999
Project of the Conservation Land Trust
Lakes Region, Chile

Tucked away in the mountains of Pumalin Park's northeast sector, the Rincon Bonito property is one of the most remote farms in the area. Situated in a back valley on the banks of the Ventisquero River, this small 526-acre farm has no road or sea access. The nearest village is eight hours away on horseback. Isolation has allowed a rural agrarian life, powered entirely by animal traction and human labor, to flourish in this small community.

Geographic isolation, however, did not protect the valley from heedless deforestation by settlers in the 1940s and 1950s. When bought in 1999, it required a huge restoration effort in order to live up to its name—"Beautiful Corner." Some old trees had survived the slash-and-burn practices, but for the most part, the fields were barren. A dedicated team of farmers planted flowers and fruit orchards, worked to restore the fields, and cultivated a vegetable garden for farm residents. At the same time, buildings and fences had to be rebuilt; bringing in outside materials is practically impossible, so local resources were used to create elegant, well-crafted structures. Although this process required some patience and ingenuity, the results speak for themselves: with its infrastructure in harmony with the surroundings, the farm is beautiful in its simplicity and order.

Run entirely on animal traction, Rincon Bonito relies on hay to fuel farm operations: summers are devoted to growing, baling, and storing hay for winter months. The farm, a model of a small-scale local economy attuned to the surrounding ecology, operates almost entirely self-sufficiently. At the same time, the farm acts as a de facto park ranger station, addressing the need for a presence in that area of the park to watch for forest fires and deter timber poaching.



HORNOPIREN FARM

855 acres/346 hectares; acquired 2000–2002
Project of Kris and Doug Tompkins
Lakes Region, Chile

Fundo Hornopiren, 855 acres of mountains, forests, pastures, and riverside habitat, lies outside of the village of Hornopiren in the Province of Palena, Chile. Only 5 percent of the farm's acreage is devoted to agricultural production; the rest remains in its wild and pristine state. Hornopiren Farm serves both as a model for preserving Chilean Patagonia's wild nature and for developing a sustainable local economy based on small-scale organic production.

From 2000 to 2002, the farm was assembled from properties of five different owners, and it may be expanded in the future as opportunities arise. When acquired, the property bore the scars of bad aquaculture, agriculture, and forestry practices: industrial salmon farming polluted the waters and littered the beaches, and an old gravel pit, an illegal municipal garbage dump, and an illegal alerce sawmill degraded the landscape. The first priorities were to report the dump and improve the road, so that the difficult project of restoring the farm could begin.

The gravel pit and dump were reforested using native species. Stumps in the fields were removed and erosion control measures implemented to create healthy pastures for sheep. The central farmhouse—built in a style typical of the region—and other infrastructure, from fences to sheds, were rebuilt. Today, appropriately scaled cattle and sheep herds contribute to the farm's productive diversity, which includes honey, fruit orchards, and a large garden that grows vegetables for on-farm consumption and sale in the town market. Wildlife also flourishes on the property. The formerly degraded farm's rebirth has amazed its neighbors.

Someday, the farm may become a gateway to the nearby Hornopiren National Park, which lies less than six miles to the east. As other nearby properties are put up for sale, they are being bought, expanding the conserved area and extending the farm's boundary closer toward the village of Hornopiren. Camping facilities and forest hiking trails on the property will be designed in the near future. During the last decade, Fundo Hornopiren has seen a remarkable rebirth as a place of sustainable production and conservation, and its contributions to the local economy and local ecology are likely to grow into the future.

ANA CUA RANCH

24,157 acres/9,780 hectares; acquired in 2002
Project of Kris and Doug Tompkins
Corrientes Province, Argentina

Bordering the vast Ibera marsh in northeastern Argentina's Corrientes Province, Estancia Ana Cua has been a major restoration project. Bought as part of a package of lands scheduled to be converted to non-native pine plantations, this 24,000-acre cattle ranch had been neglected by its previous owners. Through years of careful restoration and investment in its infrastructure, Ana Cua is now one of the best ranches in the province.

When purchased in 2002, Ana Cua had been virtually abandoned for a decade. Corrals had disintegrated. Fields previously used for cultivation or grazing had succumbed to invasive species, facilitating a mass invasion of ants that had left pastures covered in enormous anthills. Nearly 1,000 acres of citrus orchards had been abandoned. The houses were dilapidated. Even the cows looked in bad shape, a rag-tag herd overgrazing the grasslands.

The needed restoration work has been extensive. Rescuing the citrus orchards turned out to be hopeless, so virtually all of the orchard trees were pulled up and the land restored to native grasslands. The 800 acres of pine and eucalyptus monocultures planted on the ranch were similarly removed. Although monumental jobs, these efforts have proved remarkably successful, owing in part to the good red soil of the area. The restored pastures are now home to a bull-rearing program, which works to improve the genetic stock of cattle. Years of mechanical cutting have combated exotic species, and low stocking rates have helped the grasslands recover. Bit by bit, natural beauty has been restored to a landscape once destined for the ugliness of industrial tree plantations.

The ranch's infrastructure has also been rebuilt. Efficient corrals aid the local gauchos in caring for animals, resulting in a healthier herd; calf mortality has been reduced while pregnancy rates and weight gain have increased. During the rebuilding of the ranch headquarters, material from old buildings was recycled to create pleasing, carefully designed new buildings. Mature old trees and expansive views give the main house, which had to be built from scratch, a sense of history and natural elegance.

The restoration of this ranch reflects an understanding of the social responsibilities of land ownership, which do not stop at mere production, but extend to stewardship of all the flora and fauna of the landscape. Although few examples of grassland restoration in this region existed before, the work at Ana Cua demonstrates the possibility of success, bringing production and conservation into harmony.

EL TRANSITO RANCH

50,458 acres/20,420 hectares; acquired in 2002
Project of Kris and Doug Tompkins
Corrientes Province, Argentina

Stretching across some 50,000 acres of grasslands and wetlands in the Corrientes Province of Argentina, Estancia El Transito has been a keystone for conservation and ranch restoration in the area. Created from three separate properties—Caabi Rincon, El Fortin, and the original El Transito ranch—this expansive conservation property acts as a buffer zone to help preserve the adjacent, biodiversity-rich Ibera marshlands. Roughly 15,000 acres have been taken out of livestock production to be managed strictly as an ecological reserve.

Originally established in 1921, the once-venerable El Transito had fallen into a state of disrepair when purchased in 2001. The Perez-Companc Forestal company planned to transform the ranch's native grasslands into an exotic industrial monoculture pine plantation. Saving the land from this fate required buying the entire forestry company and all its holdings—a massive acquisition of 272,000 acres in multiple properties. Many of these parcels have been resold, while El Transito has been consolidated and revitalized as an exceptional ranch incorporating significant natural areas.

Rebuilding the ranch required extensive work on many fronts: corrals were dysfunctional, hinges broken, wood rotten, and houses dilapidated. Exotic eucalyptus trees had to be removed. Four gaucho stations were rebuilt or built anew, and three new corrals constructed. More than sixty miles of fencing were built to keep cattle out of the wetlands. Roads, airstrips, hangers, and machinery sheds also demanded attention.

At the ranch headquarters, much effort went into the construction or renovation of elegant homes. A skilled team of masons, painters, cabinetmakers, and finish carpenters perfected the interiors of the buildings. Landscaping transformed the grounds surrounding the houses, and a meticulously constructed *quincho*, for the traditional *asados* (celebratory barbecue feasts), was built to provide a gathering place for residents.

Today the ranch supports 6,500 cows and calves living in harmony with the abundant wildlife of the area. An excellent team of ranch hands and managers take pride in their work, as they maintain the long-standing traditions of the region. Employing thoughtful organic management, El Transito serves as a model of an agricultural operation where conservation is a consequence of production—where the overarching goal is to maintain ecological integrity across both the domesticated and wild parts of the landscape.

LAGUNA BLANCA FARM

7,418 acres/3,003 hectares; acquired in 2007
Project of Kris and Doug Tompkins, Dolores Perea-Munoz and Eduardo Choren
Entre Rios Province, Argentina

A recently acquired farm, Laguna Blanca is in the midst of a dramatic transformation from industrial monoculture style agriculture to organic polyculture. Comprising more than 7,000 acres at the confluence of the Feliciano and Parana rivers in northeastern Argentina's Entre Rios Province, the farm offers a spectacular opportunity to develop a model of diversified organic agriculture and to create a vibrantly beautiful agrarian landscape.

When bought in 2007, Laguna Blanca was begging for restoration: its infrastructure needed attention and its excellent soils were eroding away through careless management. At the farm headquarters, many new buildings—an office, kitchen area, *quincho* (the traditionally thatch-roofed outbuilding for outdoor barbecue, with a fireplace for grilling meats), employee housing, barns, machinery sheds—have been completed or are under construction. To counter erosion, terraces were built, tracing contour lines to create level fields, in which a variety of grains—including oats, flax, sorghum, barley, and wheat—are now grown. The unusual and colorful patchwork created by this arrangement of grains not only delights the eye, but also reduces weeds without relying on agrochemicals. After only a few years in this new system, the farm is producing impressive yields of high-quality organic grain, surprising the neighbors with its progressive and successful agricultural practices.

In addition to growing numerous grains, the farm also includes orchards with eleven fruit and nut species (including peaches, pears, olives, dates, hazelnuts, pecans, and almonds), at least twenty aromatic and herbal species, a wide assortment of horticulture crops, grazing pastures for sheep, and apiculture. In the orchards, the grasses that surround the trees will be cut and baled for hay. Once perennial species for polycultures are developed sufficiently, the farm will be converted to a zero-till system. Ultimately, this relatively small farm will produce roughly sixty-five different crops. More than simply an appealing theory, this polyculture system is already proving its practicality and intelligence, as the interactions between various crops, the soil, and the native wildlife improve yields, eliminate the need for expensive and dangerous agrochemicals, and help maintain a vibrant ecosystem.

Farmland Restoration

BEFORE

ALTO FELICIANO FARM

AFTER

BEFORE

ANA CUA RANCH

AFTER

Farmland Restoration

BEFORE

RENIHUE FARM

AFTER

BEFORE

VODUDAHUE FARM

AFTER

Farmland Restoration

BEFORE

EL AMARILLO FARM

AFTER

BEFORE

PILLAN FARM

AFTER

Animal Husbandry

On all of the previously profiled farms and ranches in Chile and Argentina, organic management practices are complemented by a standard of animal care that is intended to create tranquil, healthy, and happy lives for the domestic animals living there. Moving cattle without dogs, shouting, or excessive noise and incorporating other low-stress techniques helps set a tone of humane treatment for all creatures on the farm. A key goal is to instill in the younger generation a care and respect for farm animals that carries over to wildlife.

In order to increase and maintain agro-diversity, careful consideration is given to what breeds of livestock are best adapted for local conditions. A bull-rearing operation at the Ana Cua Ranch in northeastern Argentina is improving the genetics of cattle herds on associated ranches in the Ibera marshlands region. Livestock that thrive on native grasses in that subtropical landscape are both economically and ecologically beneficial. A continuing effort is underway to boost birth and survival rates, weight gain, and animal health through excellent husbandry and better genetics. Similarly, a ram-breeding program at the Vodudahue Farm on the coast of southern Chile is improving the genetics of sheep herds at Tompkins-owned farms near Pumalin Park.

Apiculture

Well suited to the climate and vital for pollination, bees are a central component of the agricultural operations at the Renihue, Pillan, Vodudahue, and Hornopiren farms, where hundreds of beehives produce tons of honey annually. Marketed under the label Pillan Organics, this honey—certified organic by the rigorous, Switzerland-based certifier IMO—represents the union of production and conservation. Bees feed on the flowering trees of the farms and Pumalin Park's expansive forest; the exceptional flavor and purity of the resulting honey serves as one of its chief selling points.

The Pillan Organics apiaries produce ulmo honey, composed primarily from the nectar of the ulmo tree, and native forest honey, a polyfloral honey that combines the nectar of dozens of flowering tree species. Both varieties are amber-colored, with smooth crystallization and a creamy texture. The honey's distinctive taste reflects its birthplace in the heart of pristine Valdivian temperate rainforest. Far away from industrial farms with their heavy use of agrochemicals and genetically modified organisms, the Pumalin apiaries produce some of the purest honey in the world, and have remained healthy in recent years when beekeepers in North America and elsewhere have been plagued by Colony Collapse Disorder (CCD). A kind of honeybee AIDS that causes sudden, high levels of mortality in apiaries, CCD is thought to result from multiple stressors, some of which are linked to industrial agriculture. The apiculture practices at Kris and Doug Tompkins's Pumalin area farms embody the absolute opposite values as the industrial beekeeping operations that provide pollination services to corporate agribusiness's monoculture crops.

All steps of honey production take place on the farms, thus helping to create a thriving local economy. Beehives from the four farms are brought to a central processing facility at Pillan. After honey has been separated from honeycombs, the wax is melted down and reshaped for use the next year as starting material in beehives. The certified organic wax processing facility at Pillan is likely the first of its kind in South America. Keeping the wax free of toxic residues helps keep the bees healthier, and, in keeping with the farms' overall philosophy of animal husbandry, it is assumed that healthy, unstressed bees will be happy bees. The honey is heated and purified before being bottled in aesthetically pleasing reusable glass jars. Sold throughout Chile and abroad, the honey of Pillan Organics serves as a delicious introduction for consumers to hear about the Pumalin Park conservation project.

Meaningful Work

The current global extinction crisis, and the calamity of human-caused climate change that is bound to accelerate it, raises a fundamental existential question for thoughtful people: what kind of work should a person do in these momentous times?

One definition of meaningful work is to use one's labor to promote health and integrity, and counter negative ecological trends such as soil degradation, species loss, and climate change. Ironically, perhaps the only positive consequence of humanity's history of mistreating the Earth is that there are opportunities everywhere to do truly meaningful work helping nature heal. Ecological restoration, in the many forms it can take, is the ultimate growth industry for a degraded world.

A revived agrarian movement, which strives to heal past agricultural abuses and create diverse, beautiful, organic farmlands and durable economies based on local production, is one antidote to the dire problems caused by the industrialized global economy. During two decades of work, the parklands, restoration, and farming projects undertaken by the Conservation Land Trust, Conservacion Patagonica, Fundacion Pumalin, and Doug and Kris Tompkins personally have created hundreds of jobs aimed at lessening the ecological footprint of local food and energy production. The base of knowledge generated in these projects is percolating out into local communities and the broader culture through a growing cadre of experienced conservationists, restorationists, and farmers who are putting agrarian values into practice—building soil, heath, community, and economy simultaneously.

Gardens

Organic gardens are generally the centerpiece of the farmlands profiled in the previous pages. Large, diverse, and aesthetically pleasing gardens sensitize residents and visitors to the importance of safe, nutritious food, and serve as a key component of the continual effort toward self-sufficiency. Employees gain a sense of pride and a respect for healthy food as they learn how to grow vegetables. Gardens are also integrated into the public access infrastructure of several of the parklands projects.

Each garden has been developed to flourish in the specific climactic conditions of its site; the gardens at Renihue Farm, for example, have been refined and expanded several times since 1993 when they were established. They may be the most productive organic temperate rainforest gardens anywhere, producing abundant crops despite receiving twenty feet of rainfall annually. The expansive gardens at Rincon del Socorro [pictured here], in northeastern Argentina, offer a different challenge—overcoming the high pest concentrations typical of that subtropical landscape. This challenge is being met with organic management, and the garden supplies delicious vegetables for guests of a nine-room ecotourist lodge, and for lodge employees and conservation project staff occupying ten nearby residences. As with all of the gardens, the overarching goal is beauty, efficiency, diversity, and easy maintenance. On-site composting, greenhouses, vermiculture, and integrated orchards are common features to the gardens at the various farms. Interns and volunteers from Chile, Argentina, and beyond often work in the gardens, learning organic gardening techniques and sometimes fulfilling course requirements.

HEALTHY—ORGANIC—ECOLOGICALLY SENSIBLE—SELF-SUFFICI ENT—BEAUTY—KNOWLEDGE—PLEASURE—SLOW FOOD—PRIDE

Quality Food

Wendell Berry, the great writer and prophet of sustainable agriculture, has written: "Eating is an agricultural act." There are few questions more relevant to a society's future prospects, its durability and health, than how it chooses to inhabit the landscape, grow food, and treat the people who do the growing. The life of farming people, the health of the land and wildlife, the cultural life of nations, and the fate of the planet's living diversity are affected. Engaging people in the production of healthy, delicious organic food represents a simple but powerful mode of strengthening their connections to the natural world.

Many of the pressing problems facing nature and people are linked to industrial agriculture, which reflects a worldview that emphasizes ever-increasing specialization, efficiency, and economic growth based on technological innovation. The problems of industrial agriculture have been so thoroughly analyzed—topsoil loss and degradation, water and air pollution, rural depopulation and the rise of corporate agribusiness, inhumane treatment of livestock, and a food stream increasingly laden with pesticides and herbicides—that there is no need to recap here.

Industrial agriculture's negative ecological and social effects have spawned a reactionary movement, a groundswell of support for local, diversified, organic farming. That movement is broad in composition, comprised of people who want to grow quality food and by people who want to eat it. Good food, the calories that fuel a child's imagination and growth, springs from healthy soils, which is to say, from excellent farmland. Farmland can stay excellent over time only if farmed by knowledgeable people who enter into a conversation with a particular place and ask what nature will allow there. Health—not a narrow emphasis on production and profit—is the overarching objective.

All of the farming operations in Chile and Argentina profiled here use this standard of "nature as measure" for what type of productive activity is appropriate and sustainable. Typically this means adopting strict organic management practices with no chemical inputs, expanding crop and livestock diversity, using composting and vermiculture to enhance soil fertility, and carefully managing livestock to avoid disease and predator losses. And at the center of farm life, vegetable gardens and orchards produce food for on-farm consumption. The result of this work? A bountiful harvest.

Perennial Polyculture
SUPPORT FOR THE LAND INSTITUTE

In the American Midwest where a highly diverse, self-perpetuating natural prairie ecosystem once flourished, today vast monocultures of corn and soybeans stretch to the horizons. More than 75 percent of the total calories consumed by human beings worldwide come from a small number of annual grain crops, which must be replanted every year. Similar scenes are familiar in agricultural areas around the globe, as industrial monoculture type farming has become the norm. The result has been high production (at least in the short term) but also a system that is highly vulnerable to disease and pest outbreaks, impoverishes fertility, depletes topsoil, depends upon massive quantities of fossil-fuel-based fertilizers, and is increasingly dominated by agribusiness corporations. In effect, an industrial monoculture farm operates on the opposite paradigm as a natural grassland or forest, which constantly builds and replenishes fertility, is highly diverse and therefore resilient, and is dominated by perennial plants.

Wes Jackson, founder of the Kansas-based nonprofit The Land Institute, has been a leading thinker in the field of ecological agriculture for decades and is the preeminent voice calling for development of perennial polyculture to solve agriculture's negative effects. Plant breeders at The Land Institute are working to create perennial grain crops that would, like a natural prairie, require no tillage and maintain fertility without outside inputs, but also produce large quantities of food. This is the Holy Grail of eco-agricultural research and the Foundation for Deep Ecology has been a longtime supporter. Even while such future perennial grains are being developed, however, progressive farmers and home gardeners are adopting many polyculture techniques to enhance agro-diversity, in effect answering Wes Jackson's often-stated challenge that to solve the ten-thousand-year-old problem of agriculture, we must begin using nature as a measure of what is sustainable in a particular place.

Vermicompost

All of the Tompkins- and CLT-owned farms in Chile and Argentina are managed organically with the foremost emphasis placed on restoring and maintaining soil health—thus, all employ some type of composting system using on-farm inputs. A few of the agricultural operations are also experimenting with vermicompost (worm composting) systems. Vermicomposting transforms a mixture of food waste, animal manure, plant clippings, and other organic material into high-quality, nutrient-rich fertilizer. The addition of specific earthworm species to the composting container speeds up decomposition as the worms ingest and break down organic matter. The resulting soil comprised of worm castings is rich in microorganisms, which convert nutrients present in the soil into plant-available forms. As a substitute for industrially produced chemical fertilizer, the products of vermicomposting are higher in nutrients and microorganisms and better for root growth and structure, while requiring no fossil fuel energy to produce.

Different types of vermicompost systems are in place on the various farms, matching the scale of the operation. In every case, the organic matter to be composted is spread out to a thickness of less than one meter so that earthworms can move easily through the material. On the cultivated polyculture farms in Argentina, large facilities process agricultural waste and animal manure using a species of earthworms native to the subtropical climate. The compost is used as a soil supplement on fields and orchards. On the smaller farms in southern Chile near Pumalin Park, vermicompost facilities mix food scraps with mulch, plant clippings, and sheep bedding, and then spread the material out in covered tanks [see accompanying photo]. Within four months, earthworms have transformed the organic matter into fertilizer for the vegetable gardens, greenhouses, and berry plantations.

Biostimulants

A liquid solution rich in microorganisms, biostimulants—akin to "compost tea"—enrich the microbial life of soil. At the Vodudahue Farm abutting Pumalin Park, biostimulants are produced by mixing plant clippings (usually pasture grass) with animal manure, compost, cereal bran, water, and various types of bacteria and yeasts in large mixing barrels; microorganisms then reproduce. To obtain starter microorganisms native to the area, assorted farm materials are mixed with wheat bran and molasses as sources of carbohydrates to begin the fermentation process. Soil-like compost is a byproduct of the process, which requires careful control of humidity and oxygen to create a standardized product. A high temperature is maintained, which selects for thermophilic (heat-loving) organisms. These are generally beneficial for plant growth, and the high temperature eliminates many disease-causing organisms. When biostimulants are applied to the soil, the beneficial microorganisms continue to multiply—thus a small quantity can produce a large improvement in soil quality and plant health. Planning is underway to develop a biostimulants facility and program at the far larger Laguna Blanca Farm in Argentina.

Worm Power

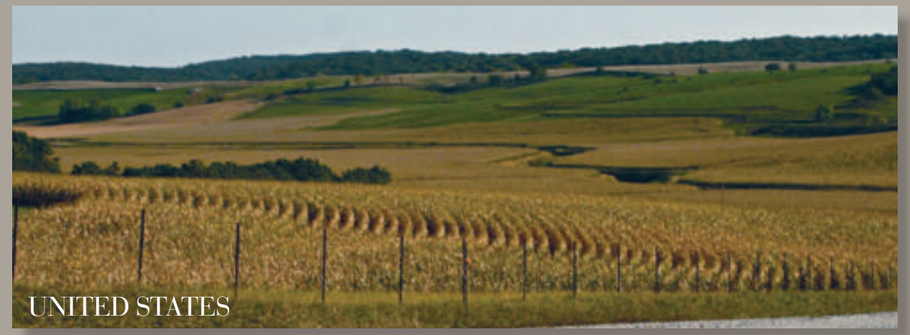
The Foundation for Deep Ecology, like many grantmakers, occasionally makes program-related investments and loans—investing part of its institutional endowment in businesses that are engaged in work consistent with the foundation's program interests. FDE and the Conservation Land Trust have longstanding commitments to support initiatives in ecological agriculture and landscape restoration, and in 2009, both made significant program-related loans to Worm Power, a western New York–based company that is pioneering vermiculture production and marketing techniques on a commercial scale. The loans are part of the financing that Worm Power is putting together to underwrite a major expansion of its operations. Worm Power operates the largest vermiculture operation in the eastern United States, offers composting and organic waste management consulting for municipalities and businesses, and is growing its facilities to serve clients, particularly commercial greenhouses, that use its worm compost products. The foundations believe that their loans offered beneficial financial terms to FDE and CLT, and could help an innovative business that is taking a waste product—animal manure from dairy farms—and producing a highly beneficial soil amendment.


ROMANIA


DENMARK

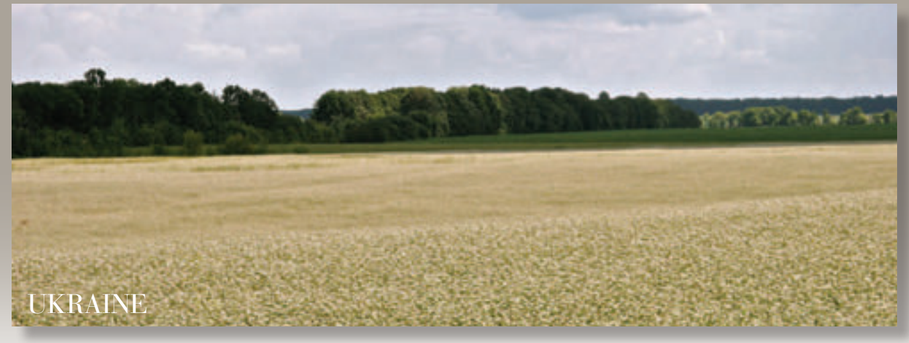

GERMANY


CHILE


UNITED STATES


SCOTLAND


CHAD


UKRAINE


ARGENTINA

Beauty in the Agricultural Landscape

One of the tragedies of industrial agriculture—beyond the fact that it has degraded and simplified ecosystems—is that it has made the world far more ugly than it should be. Few artifacts of human activity are more heinous, morally and aesthetically, than confined animal feeding operations, the so-called "factory farms" which are really animal concentration camps used to mass produce meat. Similarly, the vast monoculture croplands promoted as modern and efficient by corporate agribusiness and its academic boosters have eliminated the beauty and complexity typical of traditionally farmed landscapes in many places around the globe.

The current encouraging movement toward local, diversified, organic farming offers not just more ecologically sustainable and wildlife-friendly agricultural landscapes, but also a resurgence of beauty on farms where conservation is a consequence of production. "For beauty," as Sandra Lubarsky has written, "is the value that is intrinsic to the ecological paradigm." In all of the farmland projects developed by the Conservation Land Trust and Kris and Doug Tompkins personally, aesthetics is a central criterion. Building off the examples of beautiful agrarian landscapes from various regions, they have created farms that are pleasant and inspiring places to live and work. Well-designed, orderly gardens and architecturally elegant buildings (consistent with the vernacular style of the region), along with careful layout of pastures, croplands, and forests, combine to produce exceptional beauty and productivity.

PART 5

ACTIVISM

Sentiment without action is the ruin of the soul.

—Edward Abbey

ACTIVISM

Putting Belief into Action

A consistent principle that informs all of the conservation activities undertaken by the Foundation for Deep Ecology, Conservacion Patagonica, and the Conservation Land Trust is that the present eco-social crisis demands a response—that individuals who recognize the great unraveling of natural and human communities across the globe have a responsibility to act to stop it. Working to reverse the extinction crisis and build a more sane and sustainable culture requires both defensive and proactive conservation strategies.

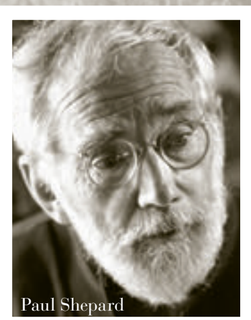
Doug Tompkins's initial conservation activism sprang from his love for wilderness and experience as a mountaineer. Climbing trips around the globe provided a disturbing view of how wild nature everywhere was under assault by human activity. His ecological worldview deepened during the 1970s and 1980s through a self-guided immersion in ecological literature including the writings of Norwegian philosopher and mountaineer Arne Naess, father of the deep ecology movement. "I suppose it was logical, given my love affair with mountaineering and adventuring in the wilderness," Tompkins has written, "that the influences of Arne Naess, John Muir, David Ehrenfeld, Paul Shepard, Henry David Thoreau, Aldo Leopold... and many others put me so firmly on a 'deep' ecological path."

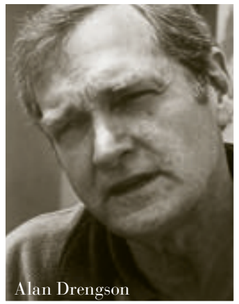
By the late 1980s Tompkins saw how the consumer culture that he'd helped promote as a businessman was but another destructive manifestation of an industrial growth economy toxic to nature. He decided to sell his stake in the fashion company Esprit that he'd cofounded, and use his wealth to endow an environmental foundation with an activist orientation. Along with the writer and activist Jerry Mander, Tompkins created a foundation in 1990. Since its inception, the Foundation for Deep Ecology (FDE), whose name and ethos comes from the deep ecology platform articulated by Arne Naess and George Sessions, has embodied the idea that strategic philanthropy can support innovative, biocentric activists tackling the root causes—not merely the symptoms—of ecological destruction.

Over the years Doug and Kris Tompkins's activism has taken multiple forms—through grantmaking, campaign work, support of legal efforts to defend wild places, direct habitat protection, ecological restoration projects, investing in the intellectual infrastructure of the conservation movement, and helping to develop local, durable economies based on sustainable agriculture. This work has been accomplished through multiple organizations and with countless partners, but a common thread is a commitment to action—vigorous and uncompromising advocacy on behalf of wild nature.


Vandana Shiva


Wes Jackson

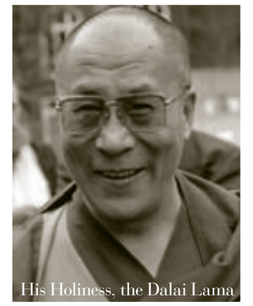

Paul Shepard


Alan Drengson


Gary Snyder


Arne Naess Kris Tompkins


Jerry Mander


His Holiness, the Dalai Lama


David Ehrenfeld


George Sessions


Charlene Spretnak

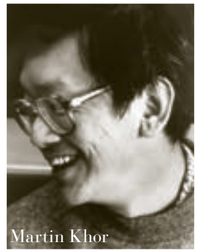

Wendell Berry


Bill Devall


Teddy Goldsmith

ACTIVISTS, COLLEAGUES, AND COLLABORATORS


Reed Noss


Martin Khor


Agnes Bertrand


Francisco Varela


Godfrey Reggio

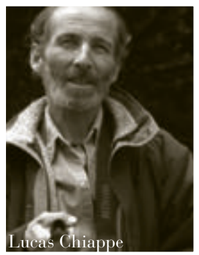

Ted Roszak


George Wuerthner


Manfred Max-Neef


Lori Wallach


David Brower


Lucas Chiappe


Mike Fay


Jeremy Rifkin


Lisa Davenport John Terborgh


Tom Butler


Fritjof Capra


Juan Pablo Orrego


Dan Imhoff


Sigmund Kvaloy Helena Norberg-Hodge


Langdon Winner


Satish Kumar


Stephanie Mills


Soña Heinonen


Paul Watson


Sara Larrain


Miguel Altieri


Kurt Willy Oddekalv

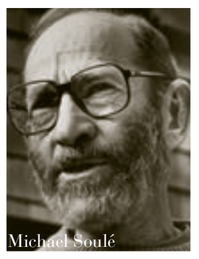

David Orr


Randy Hayes


Andy Kimbrell


Chet Bowers


Donald Worster


Michael Soulé


Wolfgang Sachs


Rick Klein


Freya Mathews


John Davis Dave Foreman


Susan Griffin


David Suzuki


Doug Peacock


Malcolm Margolin


Kirkpatrick Sale

These are just a few of the thousands of dedicated activists that the foundations have collaborated with over the past two decades.

The Deep Ecology Platform

1. The well-being and flourishing of human and nonhuman life on Earth have value in themselves (synonyms: inherent worth, intrinsic value, inherent value). These values are independent of the usefulness of the nonhuman world for human purposes.

2. Richness and diversity of life forms contribute to the realization of these values and are also values in themselves.

3. Humans have no right to reduce this richness and diversity except to satisfy vital needs.

4. Present human interference with the nonhuman world is excessive, and the situation is rapidly worsening.

5. The flourishing of human life and cultures is compatible with a substantial decrease of the human population. The flourishing of nonhuman life requires such a decrease.

6. Policies must therefore be changed. The changes in policies affect basic economic, technological, and ideological structures. The resulting state of affairs will be deeply different from the present.

7. The ideological change is mainly that of appreciating life quality (dwelling in situations of inherent worth) rather than adhering to an increasingly higher standard of living. There will be a profound awareness of the difference between big and great.

8. Those who subscribe to the foregoing points have an obligation directly or indirectly to participate in the attempt to implement the necessary changes.

—Arne Naess and George Sessions

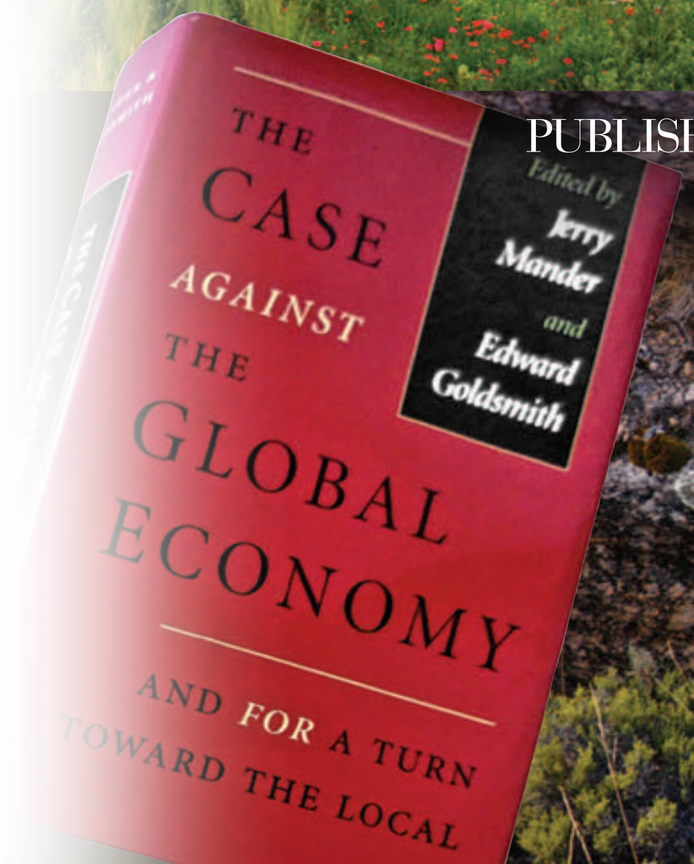
Grantmaking

FOUNDATION FOR DEEP ECOLOGY AND THE CONSERVATION LAND TRUST

Since 1990, the Foundation for Deep Ecology (and its antecedents under different names) has made more than 1,500 grants to nonprofit organizations working to protect wilderness and wildlife, promote sustainable agriculture, and oppose pernicious forms of technology such as genetic engineering. As of mid-2009, these grants totaled more than $51 million. In its early years, FDE granted under a fairly broad array of categories, but later in the 1990s its funding program was streamlined into three main program areas: Biodiversity and Wildness, Ecological Agriculture, and Globalization and Megatechnology.

Biodiversity and Wildness program grantees have included organizations that promote large-scale wilderness recovery, including the Wildlands Project (now Wildlands Network), the Yellowstone to Yukon Conservation Initiative (Y2Y), and RESTORE: The North Woods, as well as leading champions of endangered species such as the Center for Biological Diversity and Sea Shepherd Conservation Society. Ecological Agriculture grants have gone to pioneers in sustainable agriculture including The Land Institute, Occidental Arts and Ecology Center, and the Wild Farm Alliance. Globalization and Megatechnology program grantees include the International Society for Ecology and Culture, the Foundation on Economic Trends, and the International Center for Technology Assessment. A comprehensive list of the hundreds of nonprofits FDE supported during its first decade can be found in the report "Foundation for Deep Ecology: The First Ten Years."

In 1992, Doug Tompkins created a separate nonprofit foundation, the Conservation Land Trust, primarily to be the legal entity responsible for creating Pumalin Park, the huge protected area on the Chilean coast that he had begun assembling as a de facto national park under private initiative. CLT subsequently has developed numerous parklands creation and associated ecological agriculture projects [see Parts 1 & 4]. While its funds are usually targeted toward its own land conservation and restoration initiatives, CLT has also occasionally served as a grantmaker to other conservation organizations and campaigns. During its history, CLT has made more than thirty grants, in total directing nearly $12 million in funds toward projects that save habitat, protect species, or promote conservation philanthropy.



Turning Point Project

In 1999, the Foundation for Deep Ecology conceived and was a primary funder of the Turning Point Project, an independent nongovernmental organization that mounted an ambitious communications advocacy campaign. The Public Media Center (a long-time FDE grantee), the International Center for Technology Assessment, and other nonprofits supported the effort, which was funded by various foundations and many individual donors. The Turning Point Project created a series of print ads and a related website addressing numerous manifestations of the eco-social crisis confronting humanity. These issues, which had received little mainstream media attention, fell under five broad categories: the global extinction crisis, genetic engineering, industrial agriculture, economic globalization, and megatechnology.

During a six-month period, running from late 1999 into the new millennium, the Turning Point Project placed twenty-five full-page ads in the *New York Times*. More than eighty leading activist groups signed on to segments of the campaign, donating ideas and money. Several of the ads individually generated more than 100,000 responses via mail, email, and the Turning Point website. The campaign was influential in developing public opinion about a variety of issues that had largely escaped substantive public discussion, but had profound consequences for nature and people.

Intellectual Infrastructure Development

Atypical for environmental grantmakers, the Foundation for Deep Ecology has consistently directed a portion of its budget to helping build the intellectual infrastructure of the conservation movement. This type of idea incubation is a longstanding strategy of the political right in America, where a host of foundations and think tanks support free-market and libertarian capitalism and a corporatist policy agenda. On the political left, such investments have been spotty, and within the environmental movement, there has been very little institutional funding for journals, think tanks, and symposia that could help build a deeper, more effective response to the plunder of the Earth by challenging the fundamental ideas and worldview of the despoilers.

During the foundation's first decade it invested in a wide variety of such efforts, supporting numerous journals (*Wild Earth*, *Resurgence*, *Plain*, and *AdBusters* to name a few), books (*The Case Against the Global Economy*; *Deep Ecology for the 21st Century*; *Turning Away from Technology*), conferences and symposia, and ad campaigns. FDE-sponsored gatherings of leading thinkers led to the formation of several independent NGOs including the Wildlands Project, the International Forum on Globalization, and the Jacque Ellul Society. Various initiatives were at least tangentially bolstered by FDE work in this area of intellectual infrastructure. For example, the foundation's book *Welfare Ranching*, which laid out the case for ending subsidized livestock grazing on western public lands, became a key educational tool of the national public lands grazing campaign.

During a time period when mainstream environmentalism has increasingly focused on human health and welfare and market solutions, and been largely unwilling to address controversial issues such as human overpopulation and rapacious corporate capitalism, FDE has funded activist groups and campaigns that forthrightly critiqued the status quo, unapologetically defended the intrinsic value of wilderness and wildlife, and promoted a deep systemic critique.

Over the past decade, FDE's North American grantmaking program was downsized, and the foundation's primary program work in the United States has been continuing its in-house publishing program as part of the overall effort to strengthen activism on biodiversity, wildlands, agriculture, and energy issues.

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Events and Conferences

As part of its program to invest in the intellectual infrastructure of the conservation movement and strengthen activism, the Foundation for Deep Ecology has supported numerous conferences, symposia, and events over the years. In many instances, the foundation conceived and organized seminal gatherings of conservation leaders that led to ongoing conservation initiatives or independent organizations. Other times, FDE-supported events helped activists build alliances and better coordinate their actions to defend the natural world.

A few of the many events and conferences organized or funded by FDE or the Conservation Land Trust include:

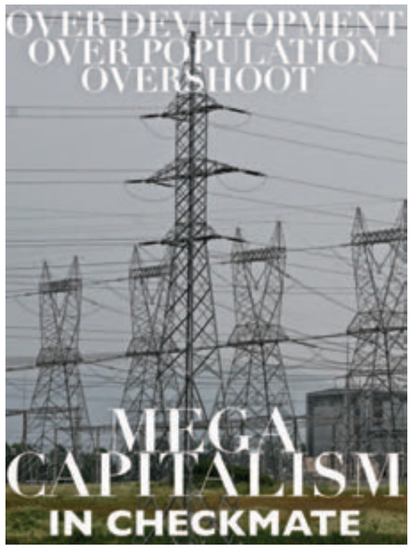
- Envisioning a Sustainable World Population, a 1991 symposium of leading thinkers convened by the foundation to discuss overpopulation as a driving force of the extinction crisis
- North American Wilderness Recovery Strategy Summit, a gathering of wilderness activists and conservation biologists hosted by Doug Tompkins to discuss large-scale wilderness recovery; the meeting led to the formation of the Wildlands Project
- Two 1994 meetings organized by the foundation that led to the creation of the International Forum on Globalization (IFG), which helped birth and grow the anti–economic globalization movement
- Zero Cut Funders' Briefing, a FDE-organized foundation gathering in 1997 to expand support for NGOs that were working to end commercial logging on public land
- Wild Thinking for the 21st Century, a 1998 FDE-hosted gathering of conservation visionaries to discuss the future of wild nature
- Wildlands Philanthropy Meeting, a 1998 FDE-organized symposium and funder's briefing that brought together practicioners and supporters of privately funded land conservation
- Environment, Development, and Politics, a FDE-organized teach-in held in Chile in 2000 featuring Vandana Shiva, Martin Khor, Wes Jackson, Jeremy Rifkin, and others
- Sustainable Forestry: Forestry Plantations and Native Forests, a 2006 two-day seminar in Santiago co-sponsored by CLT and the Chilean Centro de Estudios Publicos that discussed the ethics and practices of sustainable forestry in Chile
- IFG Confronting the Global Triple Crisis Teach-in, a 2007 multiday event in Washington, DC partially funded by FDE that addressed the intersection between peak oil, climate change, and global resource depletion and extinction
- Aquaculture Activists Gathering, a 2008 mini-summit hosted by the Conservation Land Trust that brought anti-aquaculture activists from around the globe to meet at Pumalin Park in Chile; the group exchanged information and discussed strategy for opposing industrial aquaculture's negative ecological and social effects
- Wildlands Philanthropy Forum, a 2008 symposium coproduced by the Conservation Land Trust and the National Park Foundation that brought together an eminent group of conservation leaders and donors; a related evening party launched the FDE-sponsored book *Wildlands Philanthropy: The Great American Tradition*

Forming the International Forum on Globalization

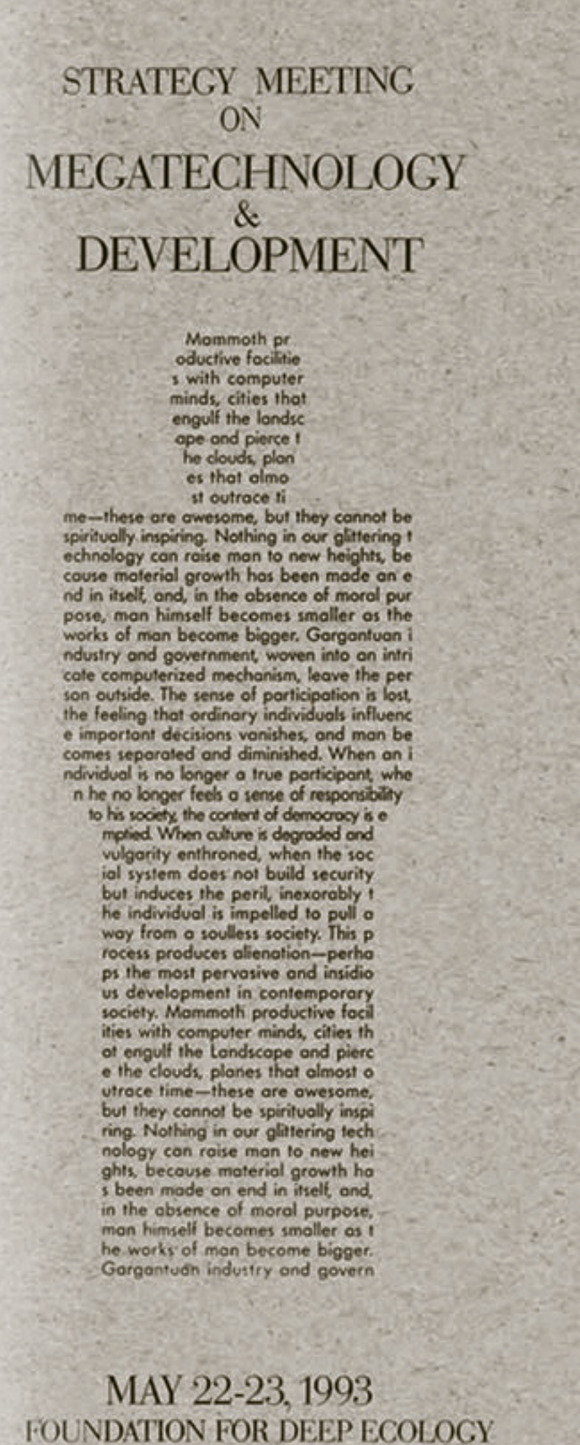
During the early 1990s, it became obvious that global environmental crises and myriad threats to biodiversity were being accelerated by corporate-driven economic globalization. Its goal was to open all doors for global financiers and multinational corporations to exploit the world's remaining natural resources as fast as possible. Wherever they were, ship them across oceans for processing, and then ship the products among continents to feed global corporate capitalism's insatiable hunger for never-ending growth, an absurd dream on a finite planet. Economic globalization was speeding up the mega-problems of climate change and depletion of resources, including fossil fuels, fresh water, forests, marine life, coral reefs, key minerals, and arable soils. Globalization contributed to the spike in species extinctions, degraded people's overall quality of life, and threatened successful local economies and indigenous cultures. All of this activity was promoted by an expanding architecture of global "free trade" institutions and agreements dedicated to eliminating restrictions on corporate and banking activities, including the World Bank, International Monetary Fund, World Trade Organization, North American Free Trade Association, and the like.

In response, the Foundation for Deep Ecology added a major program area focused on the intrinsic dangers of modern global economic ideology and its institutions and practices. Its first projects were an extraordinary series of exploratory private strategy meetings among leading environmental and social activists, together with economists and scholars from every continent, to share observations, experiences, and ideas on how to slow the juggernaut. These soon led to the formation in 1993 of the International Forum on Globalization (IFG), which shared offices with the foundation. Jerry Mander became its first director, and an international board was formed among leading activists from around the planet including Vandana Shiva (India), Martin Khor (Malaysia), Maude Barlow (Canada), Helena Norberg-Hodge (Sweden), Lori Wallach and John Cavanagh (U.S.), Sara Larrain (Chile), Victoria Tauli-Corpuz (Philippines) and the late Teddy Goldsmith (UK), among many others.

IFG quickly began publishing seminal critiques of economic globalization, thereby providing effective new language to build a movement. IFG also sponsored giant public "teach-ins," including a huge three-day event at Riverside Church in New York, and one in Seattle during the landmark anti-World Trade Organization protests of 1999, helping spawn similar protests throughout the world. A burgeoning international movement focused on fighting global finance and trade institutions and corporations. An early string of major victories helped stop or slowed down such major corporate development schemes as the Multilateral Agreement on Investment (MAI), the Doha round of the WTO, and numerous regional and bilateral trade agreements and public policies. IFG was also the first American nongovernmental organization to hold major public protest events focused on climate change. Additionally, IFG formed a unique coalition of hundreds of groups that was instrumental in finally gaining passage, after twenty years of effort, of the United Nations landmark environmental and human rights achievement, the UN Declaration on the Rights of Indigenous People.



Although IFG and other anti-globalization groups supported by the Foundation for Deep Ecology have not yet ended globalization, they helped mute the abilities of global finance and trade interests to continue their unrestrained raids on the natural world and on traditional cultures.


STRATEGY MEETING
ON
MEGATECHNOLOGY
&
DEVELOPMENT

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MAY 22-23, 1993
FOUNDATION FOR DEEP ECOLOGY

Publishing Program

Consistent with its mission to inform, educate, and inspire action on behalf of wild nature, the Foundation for Deep Ecology launched, soon after its founding in 1990, an in-house publishing program. Between its first title, *Clearcut: The Tragedy of Industrial Forestry* (published by Sierra Club Books in 1993), and its latest, *CAFO: The Tragedy of Industrial Animal Factories* (published by Earth Aware Editions in fall 2010), the foundation has conceived, produced, and funded a series of large-format books on pressing ecological issues. Following in a tradition pioneered by legendary conservationist David Brower, who used exhibit-format books to support the Sierra Club's advocacy work in the 1960s, FDE staff and colleagues have modernized the genre, producing award-winning books to inspire and educate activists.

Doug Tompkins, during his years building Esprit into a leading fashion company, had developed two exhibit-format books that won awards for their innovative design. When he became immersed in conservation activism, he recognized how a large-scale combination of dramatic photographs, attention-grabbing captions, and informative essays could draw attention to previously overlooked environmental battles. More than simply an effective campaign tool, the foundation's publishing program aims to raise the level of activism on conservation issues through systematically laying out the arguments against various deleterious practices and industries and bearing witness to the widespread destruction they create. Two decades of experience now confirm the effectiveness of this format.

Widely divergent in their focus, the FDE-produced books all share a common perspective: the assaults on wild nature, whether from industrial forest clearcuts or monoculture farming or mountaintop-removal coal mining, are symptoms of a globalized industrial growth economy that everywhere is chewing up the planet's beauty and biodiversity. All of these atrocities stem from a flawed worldview and the social and economic systems it has spawned. The conservation movement, FDE believes, will grow in strength and vision by developing a deep understanding of the larger economic and cultural factors that drive this destruction.

CLEARCUT

The Tragedy of Industrial Forestry

Clearcut was the first book project conceived, funded, and produced by the Foundation for Deep Ecology. The goal was to create a visually provocative activist tool that exposed the savagery of industrial logging on both public and private lands. With more than a hundred double-page spreads depicting industrial forest carnage from Georgia to Maine and California to Alaska, *Clearcut* presented a dramatically different view of North America's forests than coffee-table books had presented up to that time. *Clearcut* took readers behind the "beauty strips"—those scenic sections of lush forest along roads in the United States and Canada that forestry companies leave intact, masking from view the devastation beyond. The book clearly established that rapacious logging was a pressing issue in North America, not just in the Amazon and other parts of the tropics. Second, it packaged evidence of an outlaw industry's ecological crimes in a format widely accessible to activists, policymakers, and the general public. Finally, it put the forest products industry on the defensive: in 1995 the American Forest and Paper Association published a look-alike answer to *Clearcut* entitled *A Closer Look*. That book attempted to discredit *Clearcut* and put forth the preposterous argument that current industrial forest practices are beneficial to forests because they mimic natural events, such as wildfires and hurricanes. *Clearcut* was the centerpiece of a national outreach and educational campaign, with FDE distributing 12,000 copies at no charge to conservation activists, policymakers, and the media.

Contributors: Edited by Bill Devall; Edgar Boyles, Photo Editor; with essays by Reed Noss, Dave Foreman, Chris Maser, Colleen McCrory, Ed Grumbine, Herb Hammond, Mitch Lansky, and others.

Copublished with Sierra Club Books and Earth Island Press, 1994 (first edition, paperback and hardcover), 1995 (second edition, paperback).

TRAGEDIA DEL BOSQUE CHILENO

The Tragedy of the Chilean Forest

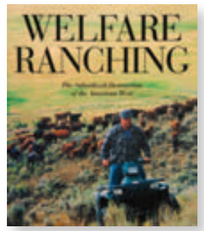
Adrianna Hoffman, one of Chile's leading conservationists and a former executive director of the Chilean forest advocacy group Defensores del Bosque and former head of Chile's National Environmental Commission (CONAMA), states in her introduction to *La Tragedia del Bosque Chileno* that the book *Clearcut* inspired her to produce a photo-format volume on the sad plight of Chilean forests. FDE, along with the Weeden Foundation and various other funders from around the world, contributed the financial resources that allowed Defensores del Bosque to publish an incisive critique of contemporary forestry practices in Chile and articulate a positive future vision for native forest conservation and restoration. Similarly influential but longer and more comprehensive than *Clearcut*, this book covered industrial forestry's effects on Chilean ecosystems including negative trends in soil health, biodiversity, and beauty. Its 400+ pages of photos and essays carefully documented the destructive practices of an extractive industrial economy, and proposed alternatives that are restorative and sustainable.

Contributors: Edited by Adrianna Hoffman; Felipe Orrego, Photo Coordinator; with essays by Carlos Cuevas, Sara Larraín, David Ehrenfeld, Juan Pablo Orrego, Jerry Mander, Chris Maser, Reed Noss, Vandana Shiva, Michael Soulé, Douglas Tompkins, and others.

Published by Ocho Libros Editores, Ltda., 1998 (Spanish only).

WELFARE RANCHING

The Subsidized Destruction of the American West



Despite extensive documentation about the ecological, human health, and climate change consequences of a meat-based diet, livestock production has drawn limited scrutiny from environmental organizations, government agencies, and the public at large. *Welfare Ranching* illuminated the ecological damage that domestic livestock cause to western public lands, analyzed the grazing system's economic absurdity, and considered how sound public policy has been circumvented by the cowboy myth's tenacious grip on the public imagination. The book also addressed global livestock issues and the Midwest feedlot system, which dominates American agriculture. The effects of livestock grazing are subtle and less obvious to the untrained eye than, say, an open-pit mine or clearcut. Many of the ecological changes associated with livestock production occurred a century ago, and society has accepted the altered landscape as normal. Few people realize that the desert washes they see across the Southwest were once lovely streams shaded by cottonwoods or willows, or that sagebrush-covered valleys in Montana may have had a nearly continuous cover of grass a century ago. The effects of livestock grazing—biodiversity loss, soil erosion, and water pollution—are cumulative rather than immediate. With conservative estimates showing that federal taxpayers subsidize over $1 billion in direct costs to the ranching industry every year, *Welfare Ranching* gave this important environmental issue the attention it deserves, and was a centerpiece of a larger educational campaign linking livestock production to water pollution, species endangerment, and habitat loss.

Contributors: Edited by George Wuerthner and Mollie Matteson; with essays by Edward Abbey, Joy Belsky, Andy Kerr, Christopher Manes, Thomas M. Power, T.H. Watkins, and others.

Published by the Foundation for Deep Ecology, distributed by Island Press, 2002.

For more information visit www.publiclandsranching.org.

FATAL HARVEST

The Tragedy of Industrial Agriculture

Fatal Harvest comprehensively documented the destructive effects of the current industrial food system, offering a thoughtful critique of monoculture farming, genetic engineering, pesticide use, irradiation, and other aspects of corporate agribusiness. To increase public awareness about the ecological, cultural, economic, and health ramifications of the global industrial farming system, FDE collaborated with the International Center for Technology Assessment and its Center for Food Safety (CFS) to produce the book. CFS founder and executive director Andrew Kimbrell, an author, attorney, and activist, spearheaded the research team and project. Leading experts on sustainable agriculture contributed essays and photographs. From shattering myths about the conventional food system to cataloging its impacts (issue by issue, and crop by crop) to providing an alternative vision of ecological agriculture, *Fatal Harvest* made a powerful case for diversified, organic farming techniques and for the restoration of local knowledge including agrarian and wild values. The book's final section offered a variety of perspectives on efforts to integrate wildlife-friendly practices with organic production, as well as developing more regionally diverse systems of production and distribution. The book's innovative graphic design taught the reader to look at an agricultural landscape and recognize the differences between an industrial approach versus truly ecological agriculture, which uses nature as measure and where conservation is a consequence of production.

Contributors: Edited by Andrew Kimbrell; with essays by Wendell Berry, Jerry Mander, Helena Norberg-Hodge, Vandana Shiva, Monica Moore, Wes Jackson, Alice Waters, Gary Nabhan, David Ehrenfeld, and others.

Published by the Foundation for Deep Ecology, distributed by Island Press, 2002.

The Fatal Harvest Reader

A concise, text-only version of the larger book suitable for college course adoption, *The Fatal Harvest Reader* (Island Press, 2002) gathered the essays from *Fatal Harvest*, which comprehensively described the unsustainable nature of the globalized industrial food system.

THE SELECTED WORKS OF ARNE NAESS

The Foundation for Deep Ecology conceived and funded this monumental project to collect, revise, and publish some sixty years of writing by one of the most radical and sagacious philosophers of the twentieth century, thereby bringing the full range of Naess's work to contemporary English-speaking audiences. Arne Naess's philosophical discourses—especially his ecophilosophical writings—are among the most important works on environmental and social ethics of the last fifty years. Countless writers, thinkers, philosophers, and activists have been influenced by his ideas, although they are often unaware of the source of the influence. Born in Oslo in 1912, Naess was a philosopher, mountaineer, and environmental activist who is perhaps best known for his characterizations of the "deep, long range" and the "shallow" ecology movements. Naess compares the shallow movement with band-aid patches or reforms that ultimately fail to address the philosophical, social, and political roots of the ecological crisis. Conversely, the deep ecology movement stresses the importance of addressing the fundamental causes of the crisis. Under the editorial direction of Professor Harold Glasser, Naess's works were updated and adapted to meet contemporary standards for philosophical publishing. The ten-volume collection covered a huge landscape of philosophical discourse and social thought, including the philosophy of science, empirical semantics, skepticism, Gandhi and Spinoza, peace studies, democracy, and environmentalism.

Contributors: Harold Glasser, Series Editor; Alan Drengson, Associate Editor; with a preface by Bill Devall and George Sessions.

Published by Springer, The Netherlands, 2005.

WILDFIRE

A Century of Failed Forest Policy

Wildfires have helped shaped North America's landscapes since the dawn of time. They are a force that humans cannot fully control, and thus understanding, appreciating, and learning to live with wildfire is ultimately the wisest public policy. With more than 150 dramatic photographs, *Wildfire: A Century of Failed Forest Policy* explored the topic of wildfire from ecological, economic, and social/political perspectives while also documenting how past forest policies have hindered natural processes, creating a tinderbox of problems today. More than twenty-five leading thinkers in the field of fire ecology provided in-depth analyses, critiques, and compelling solutions for how society can coexist with wildfire. Using examples, including the epic Yellowstone fires of 1988, the ever-present southern California fires, and the Pacific Northwest's Biscuit Fire of 2002, the book examined the ecology of these landscapes and the policies and practices that affected them such as fire suppression, prescribed burns, salvage logging, and land-use planning. Overall, the book aimed to promote the restoration of fire to the landscape and to encourage its natural behavior so it can resume its role as a major ecological process.

Contributors: Edited by George Wuerthner; with essays by Stephen J. Pyne, Mollie Matteson, Thomas R. Vale, Les Aucoin, Gary Snyder, Dominick DellaSella, Timothy Ingalsbee, Andy Kerr and others.

Published by the Foundation for Deep Ecology, distributed by Island Press, 2006.

The Wildfire Reader: A Century of Failed Forest Policy

The Wildfire Reader (Island Press, 2006) presented, in an affordable paperback edition, the essays included in *Wildfire*, offering a concise overview of fire landscapes and the past century of forest policy that has affected them.

THRILLCRAFT

The Environmental Consequences of Motorized Recreation

The growing popularity of motorized recreational vehicles such as jet skis, dirt bikes, four-wheelers, snowmobiles, dune buggies, swamp buggies, rock crawlers, etc.—collectively termed thrillcraft—has become a major threat to the American landscape. *Thrillcraft: The Environmental Consequences of Motorized Recreation* documented the ecological, economic, political, and cultural effects of this mounting crisis with a focus on public lands. Broad-ranging essays by scientists, economists, activists, and social critics outlined the many ways that thrillcraft are degrading America's natural heritage. More than one hundred graphic photographs displayed how this motorized assault destroys ecosystems from the Florida Everglades to the Alaskan tundra. *Thrillcraft* also examined the cultural roots that have fostered such a cavalier attitude toward nature. Many Americans, from childhood, are taught to treat public lands as outdoor gymnasiums, where they increasingly search for challenges using machines rather than their own muscles and minds. These petroleum-produced thrills are acquired at the expense of the land, its beauty, and silence. *Thrillcraft* sounded a clarion call to protect wildlands, traditional recreation, and peace and quiet from this growing nuisance. Charting a vision for the future, the book recounted the stories of successful campaigns that succeeded in eliminating or reducing motorized recreation on public lands.

Contributors: Edited by George Wuerthner; with essays by Rick Bass, Tom Butler, Philip Cafaro, Dominick DellaSala, David Havlick, James Howard Kunstler, Richard Mahler, Thomas Michael Power, Paul Sutter, Bethanie Walder, Howie Wolke, and others.

Published by the Foundation for Deep Ecology, distributed by Chelsea Green Publishing, 2007.

For more information visit www.stopthrillcraft.org.

PATAGONIA CHILENA ¡SIN REPRESAS!

Will Patagonia's wild rivers be dammed, developed, and industrialized to produce electricity for distant markets? Hidroaysen, a company controlled by the international energy conglomerate Endesa, proposes to construct five massive hydroelectric dams along the Baker and Pascua rivers. The power generated would flow north toward Chile's population centers, requiring a 1,400-mile-long high-voltage transmission corridor that would fragment wildlife habitat in more than a dozen national parks and reserves. The Council for the Defense of Patagonia, a coalition of more than thirty conservation organizations including Fundacion Pumalin and Conservacion Patagonica, is leading the fight to save Patagonia's wilderness character and keep its rivers wild and free. As the educational centerpiece of the anti-dams campaign, in 2007 the coalition released an exhibit-format book *Patagonia Chilena ¡Sin Represas!* ("Patagonia, Chile Without Dams!"), which was produced with key funding and editorial support from the Foundation for Deep Ecology. With striking images and essays from many of Chile's leading conservationists, the book outlined the unacceptable ecological and cultural impacts that such mega-dams and associated transmission infrastructure would cause, arguing that Chile's energy needs can be met without destroying one of the grandest wild landscapes left on Earth.

Contributors: Edited by Juan Pablo Orrego and Patricio Rodrigo; with essays by Manfred Max-Neef, Juan Gastó Coderch, Luis Infanti de la Mora, Sara Larraín Ruiz-Tagle, Hernán Sandoval, Carlos Weber, John Wilson, Patrick McCully, Angel Cabezas Monteira, Douglas Tompkins, and others.

Published by Ocho Libros Editores, 2007.

For more information visit www.patagoniasinrepresas.cl.

WILDLANDS PHILANTHROPY

The Great American Tradition

Who saved the beauty in America the Beautiful? Writer Tom Butler and landscape photographer Antonio Vizcaíno answered this question in *Wildlands Philanthropy*. The book took readers on a visually spectacular tour of natural landmarks from Alaska to Tierra del Fuego and around the globe. With more than 350 pages, 170 color photographs, and a large-format design with exquisite production values, *Wildlands Philanthropy* told the inspiring stories of people who saved extraordinary places. From Muir Woods National Monument to Acadia National Park, from beloved icons to obscure natural areas, the forty parks, refuges, and sanctuaries featured in the book represent the incredible diversity of wildlife habitats that have been saved through private initiative during the past century. The amazing people who invested their passion and wealth to secure these scenic treasures come from every walk of life and every corner of the country, suggesting that everyone—regardless of means—can join this great American tradition of individual action on behalf of wild nature. The deluxe edition of *Wildlands Philanthropy* received various honors including a Benjamin Franklin Award for best coffee-table book and the Nautilus Book Awards grand prize. A slightly smaller paperback edition was published in spring 2010.

Contributors: Essays by Tom Butler, photography by Antonio Vizcaíno, and a foreword by Tom Brokaw.

Copublished with Earth Aware Editions, fall 2008 (deluxe hardcover edition), spring 2010 (first paperback edition).

For more information visit www.wildlandsphilanthropy.org.

PLUNDERING APPALACHIA

The Tragedy of Mountaintop-Removal Coal Mining

Plundering Appalachia delivered a searing exposé, in words and images, of the greatest ecological calamity now being wreaked upon America, an outrage justified by the desire for "cheap" power. Mountaintop removal is strip mining on steroids—a radically destructive form of surface mining whereby coal companies bulldoze the forest, decapitate the peaks with explosives, push the shattered rubble into adjacent valleys, and destroy the ecologically crucial headwater streams that had been there before. With large-format photography and engaging writing, *Plundering Appalachia* illuminated Big Coal's assault on the people and wildlife of the region, included first-person testimonies from coalfields residents about life in the shadow of mining operations, dissected the coal industry's role in the energy economy and its contribution to global warming, and celebrated the growing resistance to mountaintop removal and the myth of "clean coal." *Plundering Appalachia* received various honors, including the Independent Publisher Book Awards' Outstanding Book of the Year for 2010 in the "Freedom Fighter" category.

Contributors: Edited by Tom Butler and George Wuerthner, foreword by Douglas Tompkins; with essays by Wendell Berry, Judy Bonds, Ross Gelbspan, Denise Giardina, Richard Heinberg, Mary Anne Hitt, Robert F. Kennedy Jr., David Orr, Carl Pope, Erik Reece, Vivian Stockman, and others.

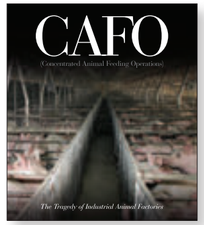
Copublished with Earth Aware Editions, fall 2009.

For more information visit www.plunderingappalachia.org.

CAFO

(Concentrated Animal Feeding Operations)

The Tragedy of Industrial Animal Factories



The long-awaited follow-up to *Fatal Harvest*, *CAFO* will provide an unprecedented view of concentrated animal feeding operations—"CAFOs"—the factory farms where increasing amounts of the world's meat, milk, eggs, and fish are produced. The CAFO model of intensive production in which animals are forced to endure miserable conditions is an ethical and ecological tragedy. The system is dependent upon rampant use of antibiotics and steady streams of subsidized industrial feeds. Industrial livestock production is now a leading source of climate-changing emissions, causes massive freshwater and ocean pollution, and contributes significantly to diet-related diseases such as obesity and the spread of food-borne illnesses. Featuring more than four hundred photographs and thirty essays by today's leading thinkers on food and agriculture, *CAFO* will take readers on a behind-the-scenes journey into the dismal world of animal factory farming. It also will offer a compelling vision for a healthier food system: one that is humane, supports farmers and communities, and is safer for people and nature.

Contributors: Edited by Daniel Imhoff; with essays by Wendell Berry, Wenonah Hauter, Fred Kirschenmann, Anna Lappé, Michael Pollan, Eric Schlosser, Matthew Scully, and many others.

The CAFO Reader

The *CAFO Reader* presents, in an affordable paperback edition suitable for course adoption, the essays included in *CAFO*, offering a concise overview of the horrific consequences of industrial animal production.

The CAFO Reader was copublished with Watershed Media in spring 2010. *CAFO* will be copublished with Earth Aware Editions in fall 2010.

Other Publishing Projects

During its first decade, the Foundation for Deep Ecology's publishing and media program made numerous grants to help support leading thinkers in the conservation movement who were writing books, and also helped fund promotion efforts for key works. Some examples include *The Resurgence of the Real* by Charlene Spretnak, *The Spell of the Sensuous* by David Abram, *Beyond Beef* by Jeremy Rifkin, *The Culture of Denial* by C. A. Bowers, and *Deep Ecology for the 21st Century* by George Sessions.

Over the past ten years, FDE's primary program work in the United States has been its in-house publishing program. But in addition to the large-format books it has conceived and published on biodiversity, wildlands, agriculture, and energy issues, FDE has in several cases sponsored translations of books that deserve wide readership around the globe. Examples of this include Russian and Spanish editions of William Catton Jr.'s classic *Overshoot: The Ecological Basis of Revolutionary Change*, a Spanish translation of Saral Sarker's book *The Crises of Capitalism*, and an English translation (from the original German) of the same work, which is finished as of 2010 but not yet published. Several other book translation possibilites are under consideration, including the potential to produce additional Russian-language editions of the important ecocentric literature of the West.

The foundation is helping support Spanish social critic Ramon Fernandez Duran's forthcoming masterwork on the eco-social crisis, which looks at the overall effects of the Urban Agro-Industrial Metabolism (to use Duran's phrase), and has several publishing projects in various stages of development. These including forthcoming books on the ecological impacts of energy production, the birth of Chile's Corcovado National Park, and the design principles used in the public access infrastructure of Pumalin Park and surrounding farms.

Aquaculture Campaign

Salmon aquaculture is factory farming transferred from land to sea. Flying along the Chilean coastline south of Puerto Montt today, one is never out of sight of salmon rearing pens, where millions of non-native Atlantic salmon are raised in ocean pens. As with factory farming operations on land, the salmon are pumped full of antibiotics. They consume feed filled with artificial dyes to give them a pink color. Roughly 98 percent of the production is for export markets. Due to a lax regulatory climate, the industry has grown explosively in Chile (800 percent since 1990), becoming a multibillion-dollar business dominated by a handful of corporations including industry leader Marine Harvest, which is based in Norway. The negative effects, beyond introducing nonnative species into South American waters (large numbers of individual fish escape from rearing pens every year), include massive pollution and spread of disease. As the industrialization of a formerly intact coastline proceeded, little scientific information on aquaculture impacts was gathered.

In the 1990s, the Foundation for Deep Ecology made several grants to conservation groups fighting the proliferation of salmon aquaculture on the British Columbia coast, including Friends of Clayoquot Sound and the David Suzuki Foundation. And FDE helped fund one of the first studies of the localized effects of salmon aquaculture in Chile. The findings, published in 2006 in the *Journal of Marine Systems* by a trio of independent biologists associated with Chilean and Irish universities, reported "strong levels of ecological degradation" and "gross pollution" near salmon farming facilities in the Pillan Fjord.

Chilean conservationists affiliated with the groups Ecoceanos, Oceana South America, Greenpeace Chile, and other NGOs are working to counter the worst abuses of the industry. Activists with Fundacion Pumalin have lent support to these campaigns whenever possible, and hosted a 2007 gathering of leading Chilean activists to meet with aquaculture opponents from the U.S., Canada, Argentina, Norway, Scotland, and India. That mini-summit, funded by the Conservation Land Trust and held at Pumalin Park, was organized to improve communication between activists who are often fighting similarly destructive activities by the same corporation on different continents. In addition, Fundacion Pumalin participates in the Foro Pacifico Patagonico, a forum for Chilean-based marine-oriented NGOs to share information and coordinate their campaigns against marine ecosystems degradation.

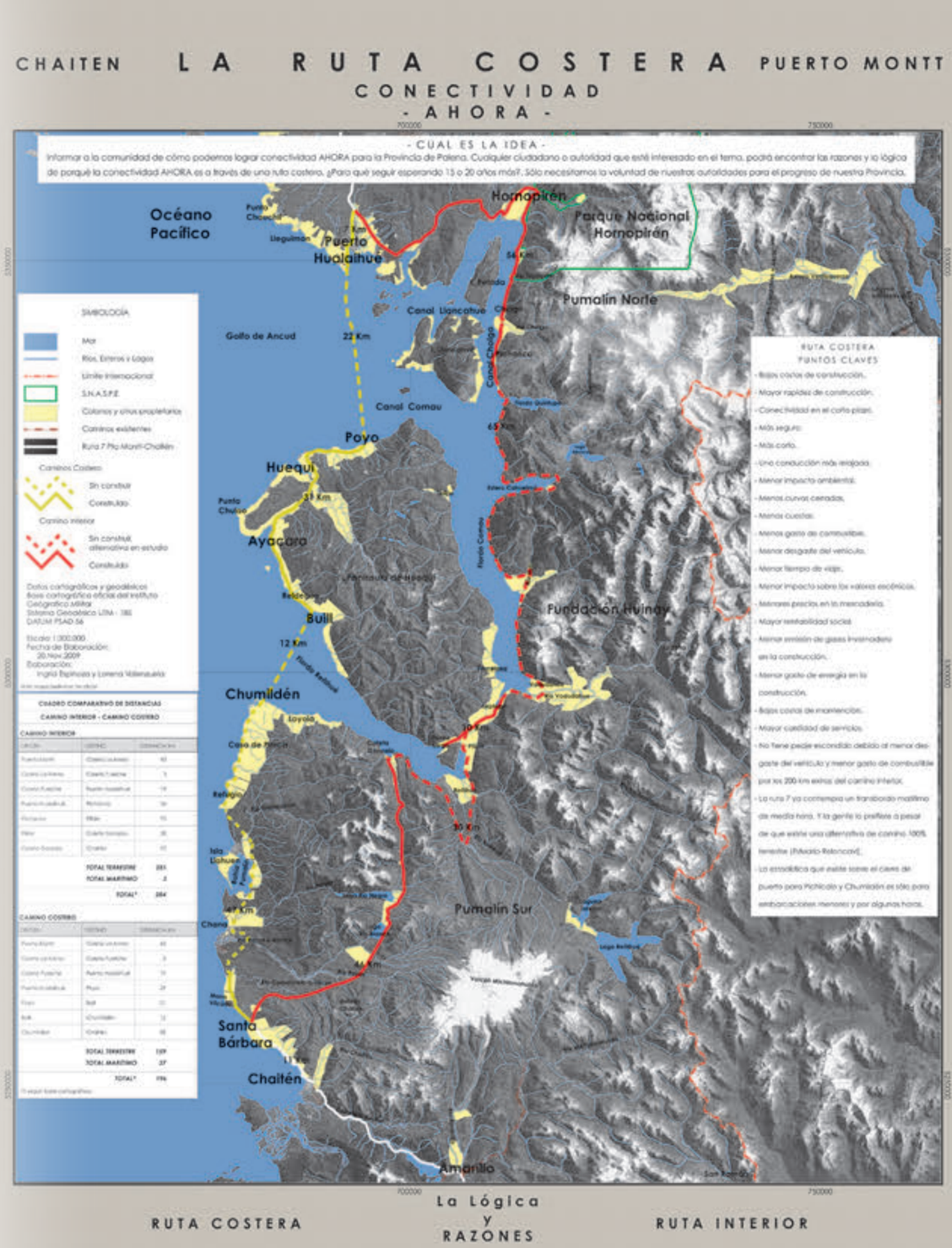
Conservation activists in Chile have long predicted that the industry's practices made a disease outbreak inevitable; true to those predictions, the Chilean salmon industry has experienced a collapse since 2007 with major outbreaks of sea lice and a contagious virus—infectious salmon anemia—decimating farmed salmon. The disease may have reached Chile via fish eggs imported from overseas, from areas where the disease was already present—another example of how globalized industries based on monocultures can affect natural ecosystems around the Earth.

Palena Connectivity Campaign

Framing their vision in terms of patriotism, national security, and economic development, some Chilean politicians have for decades dreamed of completing a land-only road connection to the south of the country. The Carretera Austral, Chile's "southern highway," experiences a roughly one-hundred-kilometer gap south of Hornopiren in Palena Province, a lightly settled region of rugged mountains. That roadless gap is where Pumalin Park now stretches from the Pacific Ocean to the Argentine border. The entire province had less than 20,000 residents before the Chaiten Volcano erupted in 2008, and has likely lost a quarter of its population since. The nearby town of Chaiten, Palena's largest community, was badly damaged and officially evacuated following the eruption. Ferries and a limited road network currently serve the coastal towns and interior villages that are scattered across the province. An expanded road system that establishes connectivity for area residents, especially along the coast, has long been a pressing social need. For fifteen years, activists associated with the Pumalin Park project have advocated for a direct, coastal route road that would link local communities and support tourism.

Despite the significant economic, safety, and efficiency advantages of a coastal highway—which would incorporate existing roads, add new sections where necessary, and link the network with two well-managed ferry crossings—during the 2006–2010 administration of President Bachelet, ministry of public works officials promoted building an "interior route" section of new highway through Pumalin Park. Conservationists might well have campaigned against that proposal because of its obvious destructive potential to one of the Earth's great wilderness areas, but a growing coalition of Chilean activists are instead taking a positive approach, arguing that a coastal route can establish better transportation connectivity for Palena Province at a fraction of the cost and much more quickly. A coastal road would be far shorter in length, and certainly safer than a winding highway through high mountains. Moreover, building the coastal route today in no way prevents an interior route from being constructed in the decades to come if traffic warrants and resources are available.

While not abandoning the idea of completing an all-land highway at some point, the ministry of public works backed away from its insistence on the interior route in 2009. That shift was precipitated by a natural event as well as economic realities. Since its eruption, the Chaiten Volcano in the heart of Pumalin Park has spewed large amounts of ash across the region; the government's previously identified interior route would have built the highway right through the affected zone. The 2010 earthquake has also squeezed government budgets as reconstruction of vital transportation infrastructure in the central region of Chile takes top priority. Whether the new administration of President Pinera or some future government will revive the idea of an interior highway through Pumalin Park remains to be seen. But the Palena connectivity campaign is committed to continuing its advocacy for a coastal route highway on economic, ecological, and social grounds until the road is completed.



Battling Proposed Patagonia Dams

The fight over whether a consortium of transnational corporations will be allowed to develop huge hydroelectric dams in Patagonia has become the biggest environmental battle in Chilean history. Pro-development forces see energy potential in southern Chile's free-flowing rivers. A large and growing movement of Chilean NGOs and activists counter that the ecological and cultural impacts of such mega-dams and energy transmission infrastructure are unacceptable—that the nation's energy needs can be met without destroying one of the greatest wild landscapes left on the planet. Conservationists contend that the era of mega-dams is over—distributed, community-scale energy production based on renewables is the wave of the future—and the majority of the Chilean people oppose damming Patagonia's rivers.

Hidroaysen, a company controlled by the Spanish energy company Endesa (which is itself a subsidiary of the Italian corporation Enel), hopes to construct five huge dams along the Baker and Pascua rivers. The sparsely populated Patagonia region doesn't need the power; a 1,400-mile-long transmission line would transport electricity north to Santiago. This massive development project would industrialize one of the world's last pristine areas, ruining its wilderness character. The power transmission corridor would fragment wildlife habitat as it cuts through more than a dozen national parks and reserves. If approved, the dams project would scar the beauty of an extraordinary region and open the door to industrializing other Patagonian rivers to fuel the wasteful and energy-intensive growth of Chile's urban central region. The proposal is effectively a subsidy for northern industrial interests, and would harm the south's potential for economic development based on adventure tourism and the Patagonia region's incredible scenery.

Fundacion Pumalin and Conservacion Patagonica are key members of the Council for the Defense of Patagonia, which is comprised of more than thirty organizations collectively fighting the dam scheme. This coalition of local, regional, national, and international NGOs includes many of Chile's leading conservationists and has pursued a multipronged approach to oppose the dams. Its Patagonia Chilena ¡Sin Represas! ("Patagonia, Chile Without Dams!") campaign has produced detailed technical comments in response to the Environmental Impact Assessments that Hidroaysen has submitted, delaying the project and forcing the company and government regulators to better examine the project's impacts. Dam opponents have waged a large-scale media campaign, using hundreds of billboards throughout Chile, full-page ads in local and national newspapers, radio and TV spots, and online updates to raise public awareness and generate support. An exhibit-format book, *Patagonia Chilena ¡Sin Represas!*, was produced as the campaign's education centerpiece, largely through the effort and funding of Fundacion Pumalin and the Foundation for Deep Ecology. FDE has also supported several of the Chilean NGOs spearheading the dams fight.

While citizen protests have demonstrated local and regional opposition to the project, and alternative energy studies have shown that Chile can meet its energy requirements through other renewable energy technology and improved efficiency, pro-development boosters and Hidroaysen are still pushing the multi-billion-dollar project. As of 2010, grassroots citizen pressure has succeeded in delaying the permitting process, invigorating the Chilean environmental movement, and raising public awareness internationally about the threat to Patagonia's wild rivers.

Defending Ibera

Protecting the great Ibera marshlands ecosystem of northeastern Argentina includes not only conserving land and restoring missing wildlife, but also enforcing environmental standards in the area. When an agribusiness company illegally constructed a causeway through the marshes, CLT–Argentina spearheaded a campaign to uphold the law and reverse the ecological damage. The conflict began in 2005 when Haciendas San Eugenio SA acquired a ranch within the boundaries of the Ibera Natural Reserve, near the Medina lagoon. Without any permits and in flagrant disregard for the integrity of the protected area, the company sent heavy equipment to begin constructing an elevated earthen roadbed or "terraplen" through the marshlands. Within days the machines had caused extensive damage to the fragile wetlands, with the new causeway effectively severing the natural flow of water through the area.

With the help of CLT, Bruno Leiva, a local settler, secured a legal injunction to stop the construction. But the company paid no heed to the court and quickly built more than thirteen miles (twenty-two kilometers) of causeway while appealing the decision. In August of 2009, Argentina's Supreme Court made a final decision on the case, firmly ordering the demolition of the entire causeway. Throughout this extended legal battle, the courts have unequivocally sided with CLT and its allies, issuing consecutive victories for the conservationists. Many times, the court has ruled unanimously that the company must pay to remove the causeway and repair the damage, but the company has fought this decision in every possible way.

CLT has helped convene a large coalition of nongovernmental organizations to fight for immediate demolition of the illegal network of "terraplenes" in the marshlands. Internet organizing, road blockades, street demonstrations, poster and billboard campaigns, and public education efforts have demonstrated the public outcry over this blatantly illegal assault on Ibera's wildness. Eduardo Machiavello, the ironically named president of Haciendas San Eugenio SA, has ignored these protests. His company's refusal to follow the law has cost it more than $300,000 in lawyers' fees. CLT, allied organizations, and grassroots conservationists from Corrientes Province and around Argentina continue to fight for the demolition of the causeway. The campaign has attracted national media attention, helping to position Ibera as one of Argentina's most critical areas for conservation.

Sea Shepherd Tour of Duty

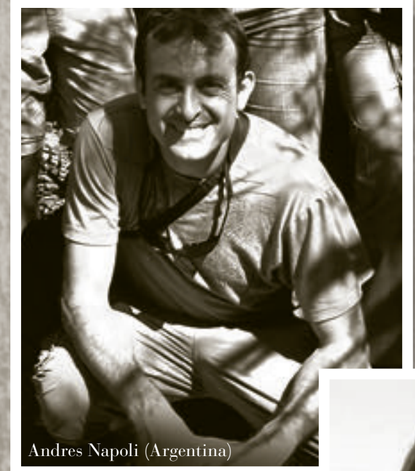
The Sea Shepherd Conservation Society, founded by Canadian conservationist Paul Watson in the 1970s, has for decades been the most courageous, uncompromising, and creative defender of whales and other imperiled marine life. In campaign after campaign through the years, Sea Shepherd activists have been the last line of defense for whales, harp seals, and other creatures when international law and national governments failed to protect them. Sea Shepherd's direct action tactics are controversial, but arguably effective. Paul Watson has become one of the best-known animal activists in the world, and the group has a long track record of gaining media exposure for marine conservation issues. The group's media attention results from its willingness to directly confront whalers, sealers, and industrial fishing boats that are plundering the oceans.

Doug Tompkins, a longtime supporter of Sea Shepherd through the Foundation for Deep Ecology, served under Captain Paul Watson on the Sea Shepherd vessel Steve Irwin in December 2008 during its campaign to deter Japanese whalers hunting cetaceans in the waters between Australia and Antarctica. Tompkins was the oldest person on the volunteer crew during his three-week stint. After one tense day when the Sea Shepherd vessel picked its way through icebergs to sneak up on a whaling boat to harass the Japanese and cause the whaling fleet to alter its position (and thus lose a day of whaling), Doug Tompkins wrote of the experience: "One thing is for certain, we have 45 people [the ship's crew] totally dedicated to one end—stopping the whaling by these pirates—and it is a good feeling of full solidarity of purpose. Something that seldom happens in life for a really good cause." During down time between shifts, crew members not on watch joined Tompkins for an informal but probing series of discussions about activism—how individuals engaged in the fight to defend the wild Earth and its creatures develop their ethical framework for action, how tactics and strategies for conservation evolve, and how the community of marine activists must grow along with the threats to the oceans.

Legal Teams

Just as legal activism has become a key tool for advancing conservation in the United States and other countries with existing bodies of environmental law, Chilean and Argentine activists are becoming increasingly sophisticated about incorporating legal tactics into campaigns to defend their countries' natural heritage. The Conservation Land Trust maintains an in-house legal department comprised of two attorneys in Chile and one in Argentina, with two other Argentine lawyers on retainer. These attorneys are regularly deployed to work on land conservation and wildlife-related issues, defend the Ibera Natural Reserve from illegal causeway construction that alters the wetlands' natural hydrology, fight illegal appropriation of water by rice farmers, and stop illegal cattle grazing in the marshlands. In Chile, the legal team works on activist campaigns and land title issues, and also may serve as legal counsel for coalitions in which CLT is a participant, including the Council for the Defense of Patagonia, the association of several dozen NGOs working to prevent dam construction on Patagonia's wild rivers.

While it may be the case that the long-term development of a conservation-minded culture primarily depends upon people forming an ethical relationship to the land, the spread of environmental law to societies around the world is a positive incremental step toward a future society that sustains wild nature. By supporting a strong legal team, the Conservation Land Trust is endorsing this progress—in effect, saying that it is important for legislators to craft strong environmental protection statutes, and that nongovernmental organizations must be vigilant to make sure that provincial and federal governments enforce them. The growing numbers of experienced environmental lawyers in Chile and Argentina is a warning shot to developers that conservationists are a sophisticated and formidable adversary who will defend the region's native forests, wild waters, and pristine habitat with vigorous activism built on a solid foundation of legal precedent.


Andres Napoli (Argentina)


Macarena Soler (Chile)


Patricia McCormack (Argentina)


Fernando Siebald (Chile)


Edwin Harvey (Argentina)

PART 6

ECO-EDUCATION AND PUBLIC OUTREACH

What conservation education must build is an ethical underpinning for land economics and a universal curiosity to understand the land mechanism. Conservation may then follow.

—Aldo Leopold

ECO-EDUCATION

Developing a Culture of Conservation

It is a truism among conservationists that the fight to protect wilderness and wildlife must be waged over and over—those who would destroy a natural area need only succeed once, but wilderness defenders must stay ever vigilant against threats to nature. A key front in that ongoing battle is the war of ideas—especially about what constitutes "progress" and how human beings should relate to the rest of Earth's living diversity. Is it ethical that we act like lords over creation, or should people strive to be "plain members and citizens of the biotic community," to use Aldo Leopold's phrase? If one accepts that human activity is precipitating a global extinction crisis—and the scientific consensus on that point is clear—what policies, programs, and personal actions can effectively turn society toward rapprochment between humans and wild nature?

These questions can only be answered if they are *asked*—that is, if there is a spirited public discusion about how people should treat the land. Moreover, most conservation activists understand that even as they fight today's battles to defend wild places and creatures, the only long-term hope is to develop a culture of conservation where society values nature and consciously chooses to leave enough habitat for other species. Creating such a culture requires broad public understanding of natural systems (ecological literacy) and broad public support for wildlands preservation. Education and outreach programs that reach many constituencies, but especially young people, are vital to achieving this end.

The Pumalin project team is constantly working with journalists, explaining its various conservation programs and articulating the ecological and economic value of protected areas. The Conservacion Patagonica staff in Chile have ongoing outreach initiatives targeting local community leaders, and public education programs that help teach citizens about the benefits of parklands. Similarly, the Conservation Land Trust–Argentina staff have designed and implemented a far-reaching program of community engagement employing print media, radio, websites, traveling puppet shows, and education displays, and by developing curricula for local schools that interpret the Ibera marshlands' biodiversity. These efforts are helping build alliances between local people, NGOs, and government agencies to advance the cause of conservation.

Schools Outreach Program

Educating children about the ecological, economic, scenic, and climate-stabilizing values of healthy ecosystems is one of the most powerful modes of community outreach that the Conservation Land Trust and Conservacion Patagonica perform. Efforts to assist local schools in teaching about land and wildlife preservation have taken different forms at various projects, but share a recognition that habitat protected today will remain secure in the long run only if there is widespread support for conservation.

To increase the ecological literacy of citizens within and around the Ibera Natural Reserve, CLT has developed educational materials for public school teachers in the communities scattered throughout the watershed. The key issues covered in the curriculum materials include biodiversity, interconnectivity within a common basin, protected areas, sustainable production, cultural heritage, and endangered species. A series of 30-minute-long DVDs based on these topics was produced, both in Spanish and the aboriginal Guarani language. A complementary written teacher's guide accompanies the DVDs. These outreach materials have been distributed to more than 130 schools and other institutions, and have been widely viewed in Corrientes-area classrooms, at public events, and on TV.

CLT–Argentina staff have organized nine training courses in seven localities attended by more than 65 educators to help local teachers incorporate these and other educational tools into their lesson planning. As part of these courses, participating teachers agreed to create their own environment-related projects at their schools. At least fourteen initiatives developed by local teachers have resulted from these outreach courses, some of which transcended the school population to include other community stakeholders.

Conservacion Patagonica's youth outreach efforts in the Chacabuco Valley, site of the future Patagonia National Park, have focused on engaging schoolchildren in the nearby town of Cochrane to learn about endangered species, such as the huemul deer, and the potential community benefits of conservation. Environmental educators with the park project regularly host schoolchildren for nature walks where they learn about native plants and animals, and have the kids assist in hands-on ecological restoration. This type of basic natural history education and active learning is vital to developing broad-based community support for the park effort, as well as inculcating a greater appreciation for Chile's natural heritage.





Outreach Through Art

Combining performance and visual art with conservation messages is a successful technique that the CLT–Argentina team has used to promote conservation in Corrientes Province. CLT hired an experienced theater and art teacher to work with schoolchildren in Ibera-area villages, including Carlos Pellegrini, Concepcion, Loreto, and the hamlets of Yahavere, Galarza, and Uguay, to develop their own theatrical productions. In thirteen different towns kids chose traditional tales, wrote plays based on them, and performed the original works in their communities. Along with the performances, the children designed and created sculptures of locally endangered or extinct species, setting the stage for a discussion about the region's ecology, native wildlife, and threats to the marshlands.

CLT also commissioned Kossa Nostra, an award-winning puppet troupe from neighboring Misiones Province, to develop and perform a traveling show in 2008 and 2009. Built primarily on beloved stories and cultural values of the Ibera region but also weaving in subtle messages about biodiversity, protected areas, and endangered species, the rousingly funny show toured to eleven communities throughout Corrientes Province, playing twenty shows and reaching more than 6,000 people. The show was a tremendous success, creating a widespread positive impression across the province.

In Chile, CLT commissioned the Caracolito theater troupe to visit rural schools around Palena Province to perform various comedic skits that delivered environmental messages in lighthearted ways. From dancing animals to speaking trees, these performances brought ecological lessons to life and encouraged kids to think about wildlife and environmental degradation. CLT sponsored the troupe, which was originally from Valparaiso, for several years, allowing them to interact with thousands of children in south Chile.





Project Schools

The large-scale conservation projects at Pumalin Park, Ibera, and the future Patagonia National Park require substantial teams of workers to develop and manage, and are far from population centers. Of neccessity, these projects have established small schools (typically 5–20 pupils) for the children of employees and neighbors, where ecological education complements the strong, traditional schooling the children receive.

Elementary schools on the Pillan and Renihue farms, in the Chacabuco Valley, and at Rincon del Socorro in Argentina have taught dozens of young children reading, writing, mathematics, science, history, and English. These project schools have been privately funded by the Conservation Land Trust or Conservacion Patagonica but follow a government-sanctioned curriculum; students must pass a series of examinations to legitimate their studies, which they have done with great success. Graduates from the various project schools tend to be among the best-prepared students when they move on to regional high schools. Some neighboring families in both Chile and Argentina have opted to enroll their children in the conservation project schools rather than local public schools.

Learning about nature occupies a central place in the school day. Children study native animals and plants in science lessons, and draw pictures of favorite animals during art classes. Through outdoor play and nature walks, students develop an awareness of biodiversity. Teachers emphasize human connections to the landscape and engage children in the mysteries of nature. Pupils also learn the basics of agriculture by helping in the garden and hone their skills in traditional dances and music. These components of their education help foster the development of a land ethic and deep connection to place in the next generation.

In addition to educating children, several of the project schools also offer courses in literacy for adult workers. These after-hour classes allow employees to complete a basic education through a combination of tutoring and self-directed study. As part of the volunteer program in the Chacabuco Valley, volunteer English teachers have offered language classes to all children and employees interested in preparing themselves for the ecotourism component of the future Patagonia National Park.

Kids' Gardening Programs

Every school associated with one of the Conservation Land Trust or Conservacion Patagonica's parklands projects incorporates some hands-in-the-dirt gardening into the curriculum. By providing children with the opportunity to plant their own garden, these programs teach children to produce food, engage in meaningful work, and learn about sustainable agriculture.

At Estancia Rincon del Socorro in the Ibera marshlands region, the children at the CLT project school tackle the challenge of raising their vegetables in the difficult soil and climate conditions of northeastern Argentina's subtropical landscape. Launched in 2006, the school's garden program is integrated with the large organic garden and orchards that supply fresh food to the inn, CLT staff, and estancia workers. At the beginning of the school term, each student receives a small garden plot, choosing what vegetables to cultivate. During the term, they go through the process of fertilizing and cultivating soil, sowing seeds in the nursery, transplanting seedlings into their prepared garden bed, nurturing the growing plants, countering any disease or pests, and, finally, harvesting produce. One afternoon per week after school all the children meet with the head gardener to tend their plants.

It is quickly apparent that the results achieved are directly linked to each individual's effort, and a spontaneous competition generally ensues. The children like to brag about the size and quantity of their vegetables and see who has the nicest looking garden. As the growing season concludes, the participants especially enjoy the experience of walking home and surprising their parents with a basket full of peppers, tomatoes, lettuce, strawberries, pumpkins, cucumbers, and even watermelons—the result of their own skill and labor.

At the Pillan and Renihue schools near Pumalin Park, classes in canning and jam-making accompanied the kids' garden projects. Working in the gardens at those farms several afternoons a week, students developed an appreciation for where their food comes from and learned useful agrarian skills, such as how to preserve food for the long winter months.

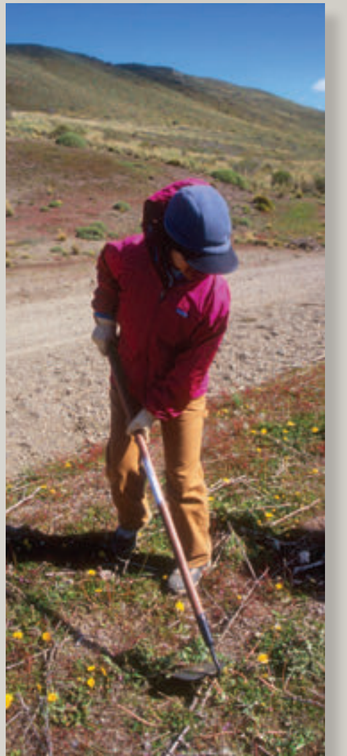
At the project school established in the Chacabuco Valley, kids help out tending the greenhouse that provides fresh vegetables to the community there, learning how to grow produce despite the short season. By introducing schoolchildren to the satisfaction of growing their own food, all these programs promote a fun and delicious form of eco-education.

Volunteering at the Future Patagonia National Park

The transformation of a degraded former ranch in Chile's Chacabuco Valley into a national park offering world-class scenery and wildlife habitat is being powered in large part by volunteer conservationists from Chile and around the globe. Since 2006, more than 400 people have participated in Conservacion Patagonica's volunteer program, working on ecological restoration projects and gaining an introduction to large-scale conservation. During the 2009–2010 season, more than one hundred people from numerous countries (Chile, Argentina, United States, Canada, Japan, Denmark, Belgium, Switzerland, Germany, and South Africa) donated their labor to the park's development. About half of the volunteers are Chileans eager to contribute to their country's expanding national park system. Ranging in age from seventeen to sixty-nine, volunteers have come as individuals or as part of organized groups from the National Outdoor Leadership School (NOLS), various universities, and other travel-service programs. Patagonia, Inc., the outdoor retailer where Kris Tompkins was formerly the long-time CEO, has established a program for company employees to volunteer for the park effort.

During the past five years, the volunteer program has removed more than half of the 400 miles of old ranch fencing, allowing wildlife freedom to roam through the area. Usable wire fence material is sold or donated to neighboring ranches, while fence posts are reused for construction or collected for firewood to reduce pressure on the region's forests. Besides tackling the grueling (but fulfilling) task of fence removal, volunteers also collect native seeds, reseed damaged areas to stop erosion, and help control exotic species. Some groups dismantle old buildings and other ranch infrastructure that cannot be used for park operations, salvaging materials for reuse. Some volunteers participate in the scientific research that is ongoing in the valley, as biologists compile baseline information about the population status of mammals, fish, reptiles, and flora of the area. Other volunteers participate in archaeology research.

Despite their diverse ages, backgrounds, and nationalities, the individuals who take part in the volunteer program have found that hands-on work to build a new national park is a transformative experience in a stunning landscape.



Volunteer Program, Pumalin Area Farms

To provide young people with experiential learning in sustainable agriculture and restoration, the Conservation Land Trust created a volunteer program based at the Renihue, Vodudahue, and El Amarillo farms associated with Pumalin Park in Chile's Palena Province. One branch of the program allows participants to work in the native tree nursery at the Vodudahue Farm. Working alongside experienced farmers, volunteers partake in the labor and lifestyle of these remote farms, learning organic management skills. The program introduces volunteers to ecologically oriented production grounded in the principle of "conservation as a consequence of production."

Volunteers, often agriculture or forestry students from Chilean universities, typically spend at least twenty-four days living and working on the farms. Depending on their interests, individuals may work in vegetable gardens or berry orchards, with sheep, goats, or cattle, or in the apiaries. Interns at the native tree nursery learn the process of growing a variety of species from seeds for use in reforestation efforts. Those working at the El Amarillo sector of Pumalin Park get an introduction to landscape restoration as they help revive degraded farms in the area. The work is physically demanding, but volunteers learn practical skills as well as experiencing the rhythms and pleasures of rural life throughout their stay.

In recent decades university training in agriculture has stressed size, efficiency, and technological solutions to problems, mirroring the philosophy of the industrial growth economy. Capitalizing on the current groundswell of interest in local food, small-scale farming, and reinhabitation of rural communities, the CLT volunteer and internship program is providing a counterpoint to conventional agricultural thinking. This initiative is helping to develop a sustainable model of production for a fragile and beautiful region, and also growing a new crop of progressive thinkers who will build a future agrarian economy well adapted to local conditions.

Land Title Assistance

In an effort to foster good land stewardship and neighborly relations, the Conservation Land Trust has developed programs in Chile and Argentina for assisting neighbors in securing legal titles to their land. In remote and recently settled "frontier" areas such as those of the Pumalin and Esteros del Ibera conservation areas, far from government administrative centers, land titles have been slow to be officially codified. Many rural people have no legal title to their property, and often live, farm, or keep cattle on parcels without surveyed property boundaries, which can lead to disputes between neighbors and poor treatment of land. Although the national governments have a procedure for granting or processing titles, the process tends to be complicated, costly, and backlogged, often frustrating settlers to the point that they give up the effort.

In Chile, the Conservation Land Trust's title assistance program originated as a means of encouraging landowner stability and careful stewardship of the landscape around Pumalin Park, which has more than one hundred neighboring properties. Although the park effort precipitated only a handful of disputes with neighbors over shared property lines, there were twenty times as many conflicts between the neighbors themselves. CLT took the position that "good fences make good neighbors"—community harmony would improve if people had inviolate legal titles for the land they lived on. At the same time, formal ownership would encourage residents to take a long-term view and care for their property.

At the start of the process, a backlog of nearly 50,000 land title requests sat on bureaucrats' desks in the Ministry of Public Lands. The government's slow and generally dysfunctional system for clearing land titles demanded a parallel and, in this case, private effort. Consequently, CLT created a small land title department and launched a nearly ten-year effort, in which tracts were measured by official surveyors, the necessary paperwork was processed, claims between neighbors were settled, opposition by third parties was dropped, and pressure was put on government agencies to process title requests more quickly. This voluntary program cooperated with neighbors, often settling claims in their favor by providing legal services designed to represent them against claims by absentee third parties and always allowing them to challenge a surveyor's assessment. Many of the local residents had filed land claims but lacked the means to hire surveyors or push their claims through the bureaucratic proceedings.

Although a slow and costly effort, it achieved 100 percent success: all land titles were finalized, leaving settlers secure of lasting ownership. This also helped pave the way for Pumalin Park to receive formal nature sanctuary status from the Chilean government in 2005 during the administration of President Lagos. Through years of experience, CLT has learned how to solve community problems related to land titles and has advised other NGOs throughout the world on setting up land title security programs that benefit nature and people.

Based on the success of the Chilean work, CLT–Argentina launched a similar effort in 2007 in the Ibera marshlands region of northeastern Argentina. There, as in Chile, the absence of clear property boundaries and official land titles has led to frequent infringement on the public lands within the Ibera Natural Reserve. Neighbors' cattle often illegally enter the public wetlands, which is perceived as common land up-for-grabs, but is supposed to be strictly protected. Lack of clear land titles can prompt disputes between neighbors and contributes to poor governmental stewardship of public land.

CLT–Argentina's title assistance team is working through the arduous and expensive task of checking, verifying, and in some cases securing titles for settlers in and around the actual Ibera Reserve. There are nearly 1,800 such landowners, making the task difficult, especially since provincial records are highly inaccurate. Over time, almost every title will need checking and verification. Using satellite imagery and aerial photography, the title assistance program can measure parcels and detect infringement clearly and quickly. Although CLT lacks any official power to settle land claims, its research and work will be integral in helping establish a stable landowner community. Legally established titles and borders will create better relationships between neighbors and eliminate the need for government intervention to defend landowners. Land ownership rights in Argentina are legally very well defined: it is only the lack of actual land titles that leaves a murky and potentially contentious condition, harmful to the community, to the province, and to the landscape. A rigorous private effort complemented by effective governmental action to verify titles will eliminate this cause of contention.

Support for Communities

The Conservation Land Trust–Argentina team in the Ibera region has collaborated with government agencies, and provided technical assistance and funding to establish new park ranger stations, improve signage, and enhance public roads and airstrips that are used to access and patrol the Ibera Natural Reserve. CLT has also worked with all ten municipalities within the reserve; in one example, CLT provided expertise to the township of Carlos Pellegrini, the most visited village, to draft its local planning regulations, replace exotic ornamental trees with native species, and incorporate green space and scenic road design principles into its economic development strategy. Other local villages subsequently approached CLT for technical assistance.

To help expand a budding ecotourism industry, CLT has organized training courses on wildlife-related guiding, reserve management, agrotourism, and cultural heritage interpretation. CLT has also invested directly in public access infrastructure, designing and building a municipal campground for Carlos Pellegrini village that sets high standards for design and construction. This installation was donated to the local government with the idea that revenues from user fees can fund the campground's maintenance and other aesthetic improvements in the village. This collaboration was very successful; the new recreation facility on the edge of the lagoon is popular, and the project set a good example for other communities within the reserve.

Similarly, in Chile's Chacabuco Valley, the Conservacion Patagonica staff have sought to develop a strong partnership with local officials, CONAF (the Chilean forest service), nearby landowners, and the community. An annual celebration, the Huemul Hike (described in Part 7), is one initiative to help local citizens gain knowledge about the Patagonia National Park project by directly experiencing the landscape. In another example, Conservacion Patagonica donated new mattresses for the medical hospital in Cochrane, and has provided scholarships for more than fifty area students to continue their studies. The hope is that these young adults will return to the region with the skills necessary for contributing to conservation or ecotourist work, and become part of a growing class of professionals who can develop the Aysen region in a way that sustains its wildness and ecological integrity.

Since the Pumalin Park project's inception, the Conservation Land Trust and Fundacion Pumalin have actively supported local communities with a wide variety of efforts, from purchasing garbage and recycling cans in Chaiten and helping community members paint their houses to assisting local churches and schools with beautification projects.

Institutional Outreach and Partnership with Governments

Many of the land and wildlife protection projects launched by the Conservation Land Trust and Conservacion Patagonica require cooperation with public agencies. A great amount of organizational effort is expended to foster good working relationships with the governmental and nongovernmental representatives that affect conservation policy in Chile and Argentina. Working proactively to develop cooperative relations, and inviting local and national politicians, government authorities, opinion leaders, and scholars to visit the projects, has served as a key tool for developing support for land conservation.

The CLT–Argentina team has worked tirelessly to establish a productive collaboration with provincial and federal officials; it took two years just to negotiate the bureaucracy and secure the necessary permits for translocating giant anteaters into Corrientes Province. In Chile, the Pumalin project team has extensive experience building infrastructure, including scenic roads and campgrounds, and so has offered its valuable expertise to public agencies doing road and bridge construction projects in south Chile. One CLT staff person works full time as a roads watchdog, monitoring transportation projects and advocating that public roads are built to high ecological and aesthetic standards. Experts from CLT's Alerce 3000 project participate in the national Alerce Consultative Committee, which develops strategies for preserving that iconic species. Pumalin project staff also work on the Global Environment Facility's Evergreen Project, advising on issues of forest conservation, public and private conservation areas, and sustainable use of forest resources. By sharing expertise in these forums, team members can influence larger policies beyond the borders of conservation areas.

While some Tompkins-related initiatives have generated controversy and contributed to tension between conservation organizations and public agencies, CLT has worked diligently to develop a good working relationship with CONAF, the Chilean parks administration. Various public-private partnerships have resulted. Notable successes include the creation of Corcovado National Park, which represented a coordinated effort between CLT and the Chilean government; the federal designation of Pumalin Park as a nature sanctuary, which took fourteen years of cooperative efforts with numerous Chilean ministries; the completion of several land exchanges with the government in which CLT traded nonstrategic properties for others crucial to specific conservation projects; and the ongoing work to create the future Patagonia National Park, a campaign that has the support of the parks administration.

Voices for Nature in the Media

After Doug Tompkins moved to South America in the early 1990s and the Conservation Land Trust began purchasing lands for Pumalin Park, the effort encountered significant opposition from pro-development boosters and right-wing politicians. This kind of reaction to conservation projects is typical around the world. The late U.S. Congressman Morris Udall once quipped that he'd "been through legislation creating a dozen national parks, and there's always the same pattern. When you first propose a park, and you visit the area and present the case to the local people, they threaten to hang you. You go back in five years and they think it's the greatest thing that ever happened."

But unlike in the U.S., where there is a long tradition of private individuals and groups buying land for nature reserves, Chile had almost no experience with wildlands philanthropy. Skepticism about a foreigner's land purchases turned to fanciful speculation. Wild rumors circulated about Doug and Kris Tompkins's intentions. A few politicians spouted incendiary, xenophobic rhetoric at them. The controversy unintentionally made Doug Tompkins one of the most famous people in Chile and offered him a microphone to become a leading public spokesman for conservation causes.

The nonsensical claims that were made about Doug and Kris Tompkins were personally unpleasant for the couple, but the result was positive for the country. Before the 1990s Chile had never had a sustained, national conversation about conservation policy—specifically, about the need to comprehensively preserve the country's biodiversity, how protected areas are crucial to that objective, and how unfettered industrial growth generates a host of negative social and ecological effects. Doug Tompkins's celebrity gave him a media platform to talk about these issues, which he has been doing consistently for two decades. His vigorous opposition to industrial aquaculture, industrial forestry, and various proposals to exploit Chile and Argentina's natural heritage has made Tompkins a key voice widely sought out by journalists.

By intentionally challenging business as usual, forthrightly critiquing existing economic models, and taking principled but sometimes lonely positions on the leading edge of environmental debates, Tompkins has strategically provoked controversy—which attracts media interest—giving conservation issues attention that they would not have otherwise received. In this way, a societal debate is fostered, and more mainstream environmentalists have room to pull public policy their direction.

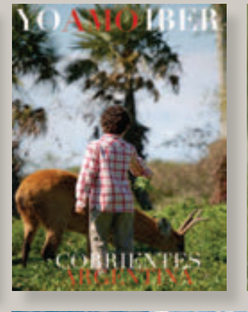
In the last several years, Kris Tompkins has become a well-known conservationist in her own right as the president of Conservacion Patagonica, and her media profile, too, has risen. With their willingness to be public voices on environmental policy, the Tompkinses contribute, beyond their foundation-related philanthropy, toward building the intellectual infrastructure of the conservation movement, articulating ideas that percolate through society via the media, which, hopefully, will move the public toward greater appreciation for wild nature.

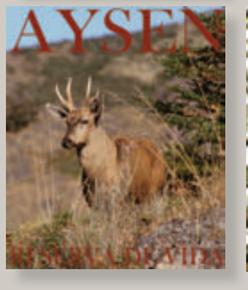
Media Outreach

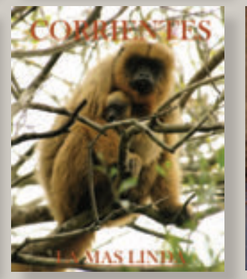
Fundacion Pumalin and Conservacion Patagonica teams in Chile and Conservation Land Trust–Argentina staff in Corrientes Province put tremendous effort into public outreach that articulates the value of wild nature, educates communities about sustainable agricultural practices, generates local support for conservation, and rebuts misinformation about their activities. This has taken many forms, including print, billboard, radio, and TV advertising opposing the massive hydroelectric dams and power lines proposed for Patagonia, similar media communication on other environmental issues in Chile and Argentina, and ongoing work with journalists.

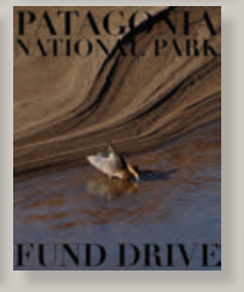
In both countries CLT and CP have worked extensively with local radio stations, seeing radio as an important means of communication in remote areas that supports localized thinking and dialogue. Local radio programs can help maintain community traditions and cohesion while providing news. In Chile, CLT has sponsored numerous radio programs in the Chiloe region that discussed agro-ecology, small-scale artisanal fishing, and various topics in environmental conservation. In the town of Cochrane, gateway community to the future Patagonia National Park, Conservacion Patagonica sponsors several radio programs annually to inform regional residents about the park effort's progress, endangered species programs, and opportunities for community involvement. More frequent public service announcements help keep local citizens up-to-date on CP activities and build support for this work.

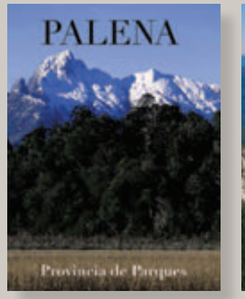
In Argentina, CLT has worked with local radio stations to create programs led by opinion leaders within the communities of San Miguel, Concepcion, and Ituzaingo; these radio shows highlight conservation issues around the Ibera Natural Reserve while involving and empowering local speakers. CLT is also funding and producing two daily radio shows with a wide listenership in the province—among both urban and rural audiences—that cover environmental issues with particular attention on the Ibera marshlands. Conservation news and CLT initiatives are being communicated at the local, provincial, and national levels through electronic bulletins and press releases that are often picked up by provincial and national newspapers. Public response to these bulletins has been excellent, especially to the news of positive actions such as giant anteater and pampas deer recovery efforts. A CLT-produced electronic and printed bulletin highlighting conservation news and achievements is also helping build cohesion and a sense of common purpose among the wider Ibera conservation community.

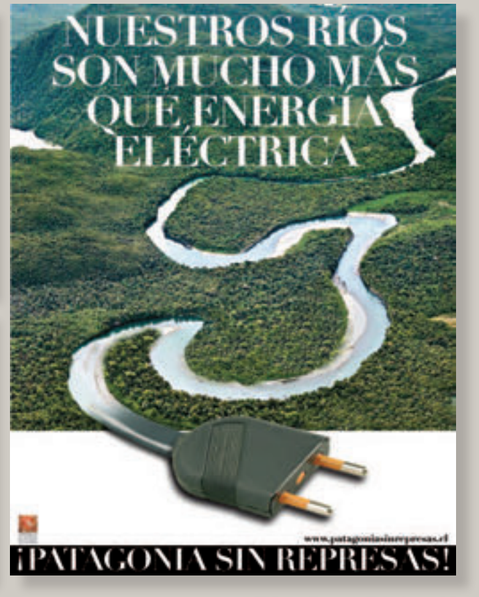












Posters

The use of well-conceived, freely distributed posters has been a low-cost, high-impact tool for Chilean and Argentine conservationists working on various activist campaigns, including the fight to block proposed mega-dams on the Baker and Pascua rivers in Patagonia.

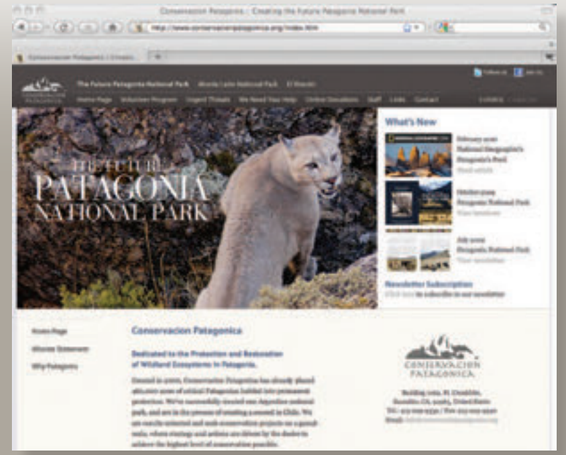
Between 2005 and 2010, posters have also been used very effectively to reinforce a regional identity linked to natural values in the regions where the Conservation Land Trust and Conservacion Patagonica have parklands projects underway. Doug Tompkins designed and CLT funded a poster series featuring exceptional photography of Pumalin Park and other wilderness areas. Countering the perception that the region was a rural backwater, the posters' tagline, "Palena: Province of Parks," effectively communicated that Palena offered some of Chile's most beautiful and best-protected country. Widely distributed and displayed by businesses and individuals around the province, the poster series contributed to local pride about Palena's ecological and cultural attributes.

Following the successful poster campaign for the Palena region, a similar effort was launched for Corrientes Province in northeastern Argentina. Beginning in 2007, the Conservation Land Trust–Argentina produced a series of posters with powerful images of wildlife native to the Ibera marshlands. A common tagline, "Corrientes, La mas Linda" (Corrientes, the Most Beautiful), associated provincial identity and pride with the Ibera Natural Reserve and its globally noteworthy wetlands. As of 2010, CLT had distributed more than 3,000 of these posters to citizens, public buildings, stores, and schools all over the Ibera basin and Corrientes Province. The absence of any institutional logos elicited a very positive response to the posters, even from people and organizations that were not conservation minded. Building on this success, CLT has used the same concept—one powerful image, simple text, and no institutional identification—to create posters centered on the endangered species that it is working to restore in the reserve, the giant anteater and pampas deer. As part of a comprehensive outreach effort, the poster campaigns are helping build a broad understanding that the Ibera region's wildlife and natural beauty are valuable assets worthy of celebration and protection.

Websites and DVDs

The Conservation Land Trust, Conservacion Patagonica, and Foundation for Deep Ecology share the web design and DVD production capability of a superb graphic artist whose work is central to electronic media communications about various projects and activist campaigns. DVDs have been produced to distribute curriculum materials about the Ibera marshlands to schools around Corrientes Province; as part of the anti–Patagonia dams campaign; and on numerous other topics including the process of making parklands, the birth of the Patagonia National Park, and the need for a new model to replace the current, Earth-destroying economic system.

Recent books in the Foundation for Deep Ecology's publishing series have also included companion DVDs. The DVD presentation for *Thrillcraft* depicting motorized recreation's destruction of public lands has been widely viewed online and during public presentations sponsored by conservation groups across the United States. The short film made to accompany *Wildlands Philanthropy* was distributed to hundreds of land trust groups in the U.S., and was chosen for screening at Washington, DC's Environmental Film Festival. The DVD produced with the book *Plundering Appalachia* has similarly been used by organizations campaigning against mountaintop-removal coal mining, and was chosen for the 2010 Wild and Scenic Film Festival.



PART 7

ECO-LOCALISM

The successful regions in the twenty-first century will be the ones surrounded by viable farming hinterlands that can reconstitute locally sustainable economies on an armature of civic cohesion.

—James Howard Kunstler

Better to keep your
Country small
Your people few
Your devices simple—
And even those for
Infrequent use.
Let people measure life
By the meaning of death
And not go out of their way
To visit far off places
With nowhere to travel
And little care for the display of great ships
And shining weapons become
Mere relicts of the past.
Let people recover
The simple life
Reckoning by knotted cords
Delighting in a basic meal
Pleased with humble attire
Happy in their homes
Taking pleasure in their
Rustic ways.
So content are they
That nearby towns
So close, the sound
Of dogs and roosters
Forms one chorus—
Folks grown grey with age
May pass away never having
Strayed beyond the village.

—Lao Tzu

ECO-LOCALISM

Building Sustainable Natural and Human Communities

A consistent principle that informs all of the conservation activities of the Foundation for Deep Ecology, Conservation Land Trust, Conservacion Patagonica, and Fundacion Pumalin is that the present eco-social crisis demands a response—that individuals who recognize the great unraveling of natural and human communities across the globe have a responsibility to act to stop it. Working to reverse the extinction crisis and build a more sane and sustainable culture requires both defensive and proactive conservation strategies. Initiatives to produce food, energy, building materials, clothing, art and entertainment, and other necessities of life in a manner that supports local economies without degrading the landscape is the ultimate work for the twenty-first century. It is essential work to reduce humanity's impact on the global climate and natural ecosystems.

The large-scale parklands projects described throughout this book have been consciously designed to reflect this commitment to eco-localism—and demonstrate that wilderness and wildlife protection efforts can help solve ecological *and* social problems by integrating new models of local, durable, and sustainable economic activity. This movement toward eco-localism has taken many forms, from using native materials and landscaping for buildings, to developing new methods of organic agriculture suited for a particular place, to pioneering alternative energy systems appropriately scaled to produce electricity for farms and park infrastructure. Whatever the specific project or activity, the goal of eco-localism starts with asking certain questions: What type of human activity is appropriate to this particular place and will allow wildness to continue to flourish? What kind of economic activity is consistent with local cultural traditions, uses local labor and materials, and will help sustain community integrity over time? Beginning with these questions opens a conversation about values—ecological, social, economic—that is crucial to have if there is any chance of turning around the industrial growth juggernaut that is devouring the natural world.

Ecotourism

Whether tourism as a mass-market phenomenon can continue in a world of increasing energy scarcity remains to be seen, but at present tourism is one of the largest sectors of the global economy. Harnessing the economic power of travelers and steering that revenue toward conservation is a highly useful endeavor in the near term. Nature-related travel is a growing sector of the overall tourism economy, and protected areas can be the economic drivers of regional economies. The national park system in the United States, for instance, is estimated to produce $13.3 billion of private sector economic activity and support more than 250,000 private sector jobs.

Public access parks in the Palena and Aysen regions of southern Chile are significant economic engines for the area. Pumalin Park and surrounding farms are one of the region's largest private employers. Before the Chaiten Volcano's 2008 eruption caused a temporary closure, Pumalin attracted nearly 10,000 visitors annually, with most coming during the short summer season. The park visitors' center at Caleta Gonzalo, with its restaurant, cabanas, and on-site farm, produces local jobs tied to ecotourism. A park visitor center and hosteria in the nearby town of Chaiten also supported the ecotourism sector before the volcano eruption caused the town's evacuation. The Conservation Land Trust–Argentina's design, construction, and donation of a municipal campground at Carlos Pellegrini village in the Ibera Natural Reserve and work with other villages in the watershed have been targeted to boost ecotourism in that region of Argentina. Conservacion Patagonica's Patagonia National Park effort is working closely with local officials and businesspeople in the town of Cochrane, the future park's gateway community, on various projects, including production of a regional tourism map.

With these and other similar efforts, the goal has not been to stimulate tourist activity for its own sake, but to help enhance appreciation for wilderness and wildlife among visitors and help local communities see conservation as a productive use of the landscape that can help support regional economies.

Local Products

Overall administration for Pumalin Park and several nearby farms is headquartered at Pillan, which is situated at one end of the Renihue Fjord. The Pumalin area farms owned by Kris and Doug Tompkins produce meat, wool, berries, honey, and vegetables for on-farm consumption and support of the local agricultural economy. Under the label of Pillan Organics, the farms produce certified organic honey and jams that are sold throughout Chile. Marketing materials for these products draw the link between sustainable agricultural production and the grand wilderness park, Pumalin, generating interest in the protected area and surrounding farms.

Wool from the farms is used by local craftspeople to produce lovely blankets and clothing, which are marketed in the park visitor centers at Caleta Gonzalo, Puerto Varas, and elsewhere. These shops and kiosks showcase numerous handcrafted goods from local cottage industries, as well as wicker baskets, ceramics, park t-shirts, maps, conservation books, and posters.

All of the revenue generated from the sale of farm products is used to help sustain the agricultural land conservation initiatives around Pumalin Park, including the farm volunteer and internship programs.

Encouraging Local Pride

ARGENTINA

Recognizing that the long-term fate of protected areas hinges largely on the attitude of local communities near them, the Conservation Land Trust has supported efforts to maintain or develop local identities rooted in the land. These projects take many forms, but generally promote a connection between community, natural beauty, and conservation. From building a village-owned campground to hosting a townwide celebration and dance on the edge of the Ibera wetlands, CLT has found practical methods of reinforcing cultural links to the landscape. By sponsoring festivities that celebrate local traditions, CLT works with communities to pass along cultural heritage to the next generation, helping to resist the hegemonic force of globalized popular culture.

In the Ibera region of Corrientes, Argentina, CLT has sponsored various initiatives to revitalize towns bordering the marshlands. Working cooperatively with mayors and other townspeople, CLT helped to renovate the town plaza of Carlos Pellegrini village. By enlisting the help of the community in designing and constructing the square, CLT ensured that the town felt fully invested in the project. The improved public space provides a central landmark and gathering place for the town, helping build community spirit. In the same village, CLT organized and supported the construction of a public access campground on the edge of the area's largest lake, providing the town with improved tourist infrastructure and a launching-point into the wetlands.

In another area of the Ibera watershed, CLT constructed a new park ranger and biological field station at a formerly run-down cattle ranch. When the day came to hand the facility over to the local government, CLT organized a community celebration to mark the transfer. Nearly the entire population of San Miguel came to the ceremony, which included an *asado* (barbecue) and dancing. The day's highlight was a performance by the dance troupe that San Miguel's mayor had helped organize; almost all of the village's young people participate in the group, learning traditional songs and dances and gaining pride in their rural heritage. This memorable celebration strengthened the bond between the villagers of San Miguel and the extraordinary landscape of Ibera.

Encouraging Local Pride

CHILE

In Chile, efforts to build local pride and support traditional culture have taken various forms. During the years that elementary schools operated at Renihue and Pillan farms, all the children learned traditional songs and dances of the Palena region. For nine years, Doug and Kris Tompkins sponsored a Chilote folk festival at Renihue: more than 400 people from Chiloe and Continental Chiloe would gather together for song and dance performances during the three-day summertime event. Numerous different troupes from around the region would perform for the audience, which arrived by boat from various communities in the area. The festival included forums on the future of the Chilote identity and community, and traditional foods such as *curantos*, a shared meal of baked seafood. Attendees learned traditional dances such as the *cueca*.

Further south, in the Chacabuco Valley, Conservacion Patagonica has sponsored an annual Huemul Festival and hike. Hundreds of townspeople from Cochrane assemble for a walk through the Tamango Reserve into Valle Chacabuco, home of the future Patagonia National Park. The route passes through habitat of the endangered huemul deer and allows local people to better understand their home region's exceptional ecology, including its imperiled wildlife. At the end of the challenging two-day hike, all participants share an enormous *asado* to celebrate their accomplishment and celebrate as a community.

In a variety of ways, these projects aim to strengthen local communities not to attract outside visitors, but more importantly, by enhancing local respect for the place, making these rural communities better, more beautiful, and more vibrant places to live.

El Amarillo Village Beautification

To improve quality of life, generate local pride, and stimulate a small-scale tourism industry, the Pumalin project has begun a collaborative program to beautify El Amarillo, the small gateway town at the park's southern entrance. A community of a few dozen houses, a public school, and a church, El Amarillo currently has no tourist infrastructure. Its location, however—roughly fifteen miles south of Chaiten on the Carretera Austral, near the hot springs of El Amarillo, and neighboring Pumalin Park—makes it an ideal place to develop amenities for visitors. Since the 2008 eruption of the Chaiten Volcano shut down the nearby town of Chaiten where a park welcome center and administrative office had been located, the modest park infrastructure at El Amarillo is being upgraded to assume those functions. With stunning views of the Michimahuida Volcano and Tabiques Mountains, the village is perfectly suited to benefit economically from its scenic location at the edge of Pumalin Park.

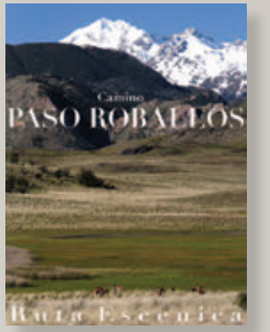
While taking care to honor local wishes, the Pumalin project has launched a cooperative village renewal effort at El Amarillo. This multidimensional initiative is constructing new essential amenities such as a supermarket and gas station, enhancing public use areas (including building bus shelters and a new fence around the community school), and helping beautify private homes. While participation in the program is voluntary, almost everyone in the town has enthusiastically agreed to work with the Pumalin team of landscape architects, designers, and builders. This team talks to each family individually about their ideas for improving the town generally and their property specifically. As the crew repaints houses, gives facelifts to building facades, rebuilds fences, and plants trees and flowers, they work with residents to create a feeling of common purpose. In exchange for the free help fixing up private residences, the Pumalin project asks townspeople to agree to keep their house and yard tidy and well maintained. Thus the El Amarillo restoration team seeks to develop a culture of orderliness and hometown pride, which will make the community attractive to visitors and locals alike.

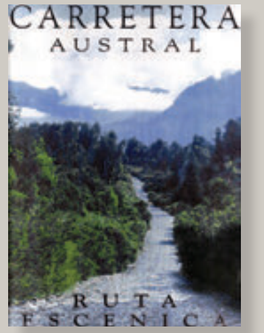
Scenic Highways

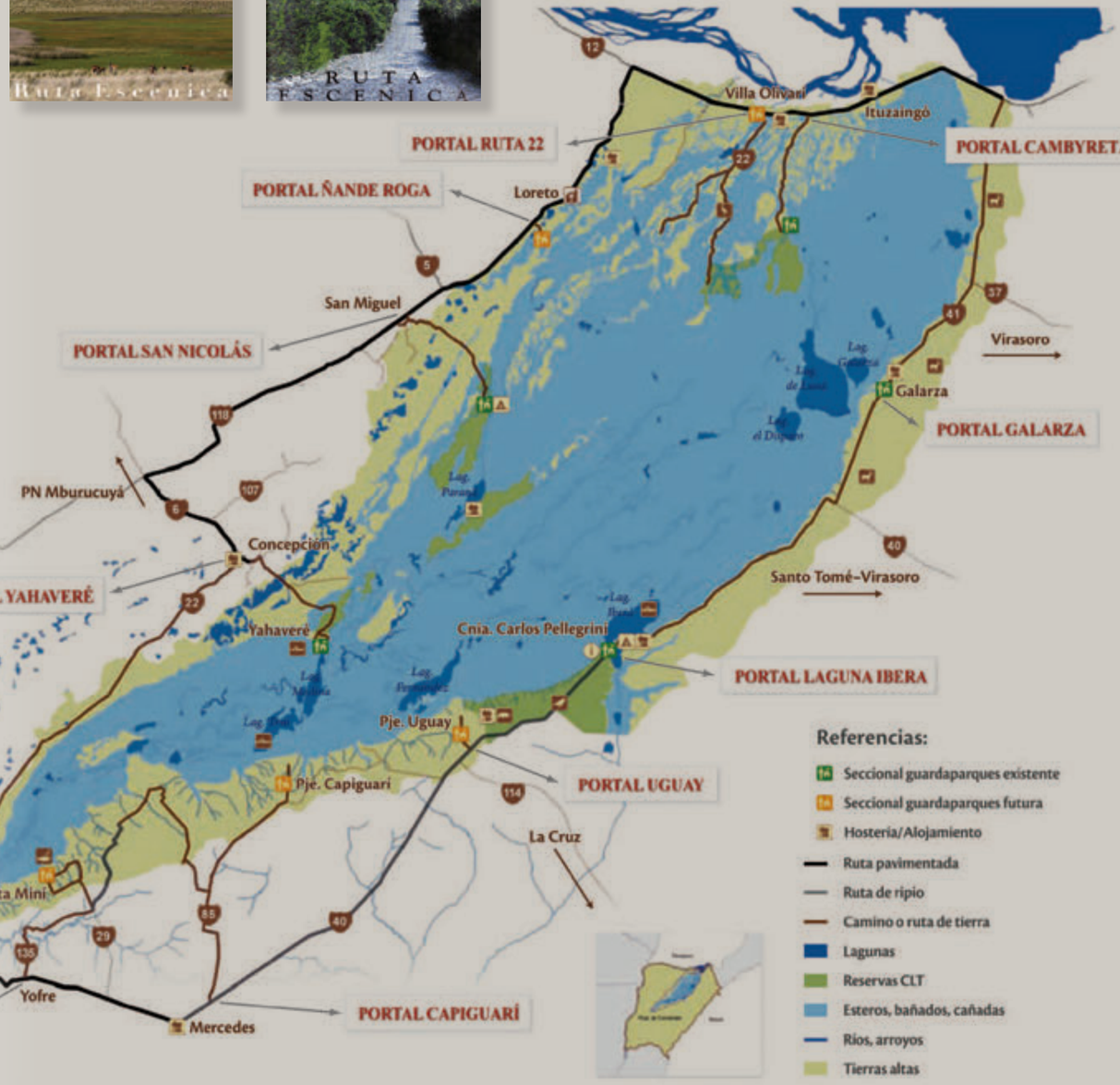
Almost as long as conservationists have been working to preserve parklands, there have been related efforts to create scenic highways that help people travel to, through, and between parks and other public lands. One of John D. Rockefeller Jr.'s first (of many) contributions to the U.S. national park system was to pay for cleanup of a roadside in Yellowstone, where the contractor had left an unsightly mess. The explosion of automobile-based tourism in the United States nearly a century ago was linked to the burgeoning national parks movement, and even today the most visited unit administered by America's national park service is the Blue Ridge Parkway, a scenic highway linking Shenandoah and Great Smoky Mountains national parks.

The Conservation Land Trust has built on this legacy of using scenic byways to promote aesthetically pleasing, controlled development in Chile and Argentina. CLT secured the first-ever "scenic highway" designation in Chile, for the seventy-five-kilometer section of the Carretera Austral—Chile's southern highway—that runs through Pumalin Park. CLT currently supports the idea of making the entire Carretera Austral into a scenic highway, and is sponsoring a book and video presentation by landscape photographer Linde Waidhofer to show the spectacular beauty of this route. Such a designation would cost the national government virtually nothing, but could significantly boost ecotourism in the Palena and Aysen regions if roadbuilding practices were improved, scenic vistas protected, and signage along the route standardized. Traveling the Carretera Austral could become one of the world's great road trips, as people would come not only to visit Patagonia's extraordinary parklands but also to visit the small communities along the route. CLT and Conservacion Patagonica are also advancing the idea of designating the road through the Chacabuco Valley, which connects to the Argentine border, as a scenic byway.

Similarly, CLT–Argentina has developed a detailed map, prospectus, and posters to campaign for a scenic route around the Ibera marshlands of Corrientes Province. Using existing roads, a future scenic highway of more than 1,300 kilometers would pass through ten communities in and around the Ibera Natural Reserve. Along the way, visitors would find interpretive centers, places to take boat and horseback rides into the marshlands, and other ecotourist activities. With consistent signage, a guide to the area, and cooperative marketing efforts, a scenic highway in the Ibera region would help local residents build their economy around the natural values of the area, enhance a regional identity, and build a culture that values conservation.







Energy Conservation and Renewables

Producing, transporting, consuming, and wasting energy profoundly affects the natural world and health of people. The overall footprint of the energy industry is huge and growing, with well-known toxic effects, the most notable of which is a warming planet due to human-produced climate change pollution. Besides food production, there is no more important factor to address than energy when attempting to build an eco-local economic model for sustainable human communities.

At the future Patagonia National Park, Conservacion Patagonica's energy czar has developed a plan for the park's infrastructure that depends on energy efficiency and renewables. The first goal was to design all buildings for maximum conservation with excellent insulation and construction, far better than the standard in the region. All electrical appliances, water pumps, etc. use the most efficient technology available, and visitors will be encouraged to conserve water and electricity. All of the lighting will employ super-high-efficiency LED (light emitting diode) bulbs, which use a fraction of the energy of compact fluorescents and contain no mercury. Electricity for the park facilities is being generated locally with a micro-hydro turbine installed in 2005, and wind speed monitoring has been underway since 2006 to determine whether small-scale wind generation is feasible for the park project's energy mix. Various park buildings are being fitted with cylindrical parabolic solar concentrators that produce both hot water and electricity. Although the solar radiation in the Chacabuco Valley is low, this efficient dual solar technology (simultaneous thermal and photovoltaic production) is anticipated to contribute 100 percent of the total needed energy for domestic hot water, and a significant percentage of the energy needed for heating and electric consumption in each building.

Appropriately scaled mini-hydro plants also produce power at Pillan Farm, Caleta Gonzalo, and other Pumalin area farms, some in combination with a photovoltaic system. A larger hydropower system incorporating two 150 kilowatt turbines is planned for Vodudahue Farm; it is intended to generate the electricity for the farm operations including the native plant nursery and biostimulants facility there, with excess power producing hydrogen for use in machinery and vehicles. High-efficiency LED lighting is also being incorporated into Doug and Kris Tompkins's farm projects in Argentina. In all of these installations, the goal is to develop practical, appropriately sited, and replicable examples of energy production at a local scale.

Hydrogen Power at the Future Patagonia National Park

Conservacion Patagonica is working to make the future Patagonia National Park the first energy-independent, hydrogen-powered public access park in the world. By using hydrogen to store energy generated from renewable sources, CP is pioneering a new model for carbon-neutral national parks.

Developing an efficient mode of storing electricity is essential for localized renewable energy projects, since periods of high production (e.g., windy days) may not correspond with times of high consumption. In Patagonia, energy storage is a particularly crucial issue, as wind energy is highly seasonal. The future energy system will employ wind-generated electricity to perform water electrolysis, using an electric current to break apart the water molecule, thus creating pure hydrogen. Hydrogen gas is then captured and compressed into tanks to facilitate transport and storage. Once in its elemental form, hydrogen has a high potential to generate energy: when combined with oxygen, the reaction releases a substantial amount of energy as water is formed. Hydrogen technology emits virtually no unwanted gases or byproducts in production and consumption. The park would use stored hydrogen as a fuel for tractors, trucks, and boats, and as an energy source for the visitor center, guesthouse, employee housing, offices, and ranger stations. This flagship project will be the first non-experimental hydrogen energy system in Latin America and is expected to be fully operational by 2015.

Hydrogen energy may prove crucial to the Patagonia region, allowing residents to benefit from locally produced renewable energy without requiring ecologically damaging transmission lines to extend the power grid. Since a small hydrogen fuel cell can provide energy to a group of houses, widespread adoption of that technology could eventually replace gas or diesel-powered generators and reduce firewood consumption. This form of potentially renewable, distributed energy production also offers a stark contrast with the proposal to dam Patagonia's wild rivers for massive hydroelectric stations that would require an enormous transmission system to send the power to distant urban markets.

Animal Traction

A major part of industrial agriculture's negative impact stems from its heavy reliance on fossil fuels. Numerous commentators on agricultural issues have noted that consumers of food (or food-like products) produced by agribusiness are essentially "eating oil"—because the calories of energy used in growing and distributing the product far surpass the number of calories in the food. In a world of looming energy scarcity, the days of the "3000-mile Caesar salad"—lettuce grown in California and shipped to New York in refrigerated trucks—will soon be untenable. A key part of the transition away from the fossil fuel economy toward more local, durable means of production will be readopting systems of animal traction to grow food. This transition is beginning at all of the farms owned by Doug and Kris Tompkins.

By substituting horses or oxen for tractors and trucks, farms tap into the solar energy captured in pasture grasses and create working models of low-carbon agriculture. In addition to reducing fossil fuel dependence, using draft animals generally causes less soil compaction than conventional farm equipment and produces valuable fertilizer as a byproduct. (Moreover, tractors don't reproduce themselves.) Eventually, the Pumalin area farms will use horses to help manage livestock, cut hayfields, apply compost fertilizer, move loads around the farms, tend to berry orchards, and complete other tasks. Rincon Bonito, a farm on the northeast border of the park, already has a system of animal traction in place; it uses no motorized equipment whatsoever. Within five years, all the other farms in the area—Hornopiren, Vodudahue, Pillan, Renihue, and El Amarillo—will have converted from tractors to horse power. Horse-drawn carts, mowers, plows, and other implements, many of Amish design, have been purchased, and farm workers are now experimenting with their use.

Training horses is the central challenge for expanding the animal traction program. Creating a positive working relationship between horse and farmer requires changing the paradigm from harshly breaking horses to a "zero violence" strategy. The farms have hosted two courses on this effective method of training through cooperation, and several horses have already been fully trained for agricultural work.

Planning is also underway to convert Doug and Kris Tompkins's three large farms in the Entre Rios Province of Argentina to animal traction. As of 2010, the full restoration of these properties is still a work in progress. The transition from conventional to highly diverse organic production is far along, but the shift toward animal power remains some years away. Attempting that transition, however, and showing that it can be profitable, would serve as a useful example to the regional agricultural community in Argentina. Although horses and oxen are not expected to replace motorized equipment entirely on these large farms, the long-term goal is for horse traction and hydrogen-powered equipment to move all the farms toward energy independence and carbon-neutral food production.

Land Ethics—The Foundation of Eco-Localism

While the mechanisms used to conserve land and wildlife are many—from laws to economic incentives to social norms—most conservationists believe what Aldo Leopold articulated more than a half century ago, that individual citizens must develop an ethical relationship with land for conservation to succeed. Without personal affection for and a sense of kinship with the diversity of creation, useful tools such as legal protections for wildlife or tax breaks for land conservation are not likely to preserve wild nature over time. People protect and sustain what they love, not because of tax deductions. And so building a culture of conservation is the fundamental long-term task of the conservation movement. Beauty, biodiversity, and wildness must be conserved not simply to support human well-being but to preserve the health of the entire biotic community.

Whether initiatives to promote eco-localism will succeed or not depends in large part upon cultural values, which evolve over time. In 2010, a limited-run, private edition book, *Biodiversity and Wheat*, was published to communicate how Doug and Kris Tompkins's conservation projects align with their personal land ethic. Produced in English and Spanish, a key audience for the publication was other large landowners in Argentina and Chile who have had little exposure to wilderness protection, ecological agriculture, or endangered species recovery programs. The book was an effective tool to describe the range of ecological and social values that are advanced by land conservation, and to counter various misconceptions about the parks and farming projects the Tompkinses have launched in South America.

We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect.

—Aldo Leopold

AFTERWORD

Fighting for a Wild Future

What judgment can be made about a conservation program after just two decades, when the work of ecological recovery need last for millennia? Perhaps just this: it is a promising start! The range of projects and campaigns described in this volume are testament to the power of individual action. Spirited people working in concert to protect wild places and creatures can achieve remarkable gains, despite the array of obstacles conservationists face.

Philanthropy and advocacy are a powerful combination for conservation—and as Doug Tompkins has often said, if the ten thousand richest people on Earth were to put the majority of their personal wealth and influence into the fight to save wildness, the world could change overnight. Such a groundswell of nature-oriented activism could stop the global extinction crisis faster than government action, faster than a cultural shift, faster certainly than waiting for an unsustainable economy based on perpetual growth to collapse and be replaced with a durable economy harmonious with the diversity of life.

And speed is of the essence, when every day species fall into the endless night of extinction due to humanity's overexploitation of the planet's natural wealth. But despite the negative trajectory of land health globally, ever-increasing population pressures, and growing assaults on beauty and biodiversity, "There is no time," as the late, great philosopher Arne Naess wrote, "for overly pessimistic statements that can be exploited by passivists and those who promote complacency." Naess identified himself as "a convinced optimist—when it comes to the twenty-second century." In no way did Naess suggest the challenges would be easily surmountable. To the contrary, he believed the broad campaign to achieve peace between humans and nature would be long and difficult; thus it is critical to begin the work of deep systemic change immediately and with vigor. "How much is left of nature," he wrote, "obviously depends upon what we do today and tomorrow."

All of the conservation projects undertaken by the Foundation for Deep Ecology, Conservation Land Trust, Conservacion Patagonica, Fundacion Pumalin, and Fundacion Yendegaia, and by Doug and Kris Tompkins personally, reflect this spirit. The status of wildness, integrity, beauty, and the health of the biotic community in the centuries to come depend upon the actions of humans living today. For the Tompkinses and the hundreds of fellow conservationists working on these initiatives with them, it is a privilege to be making significant, tangible steps toward building a future culture that honors and accommodates wild nature.

We are not fighting progress. We are making it.

—Howard Zahniser, author of the Wilderness Act of 1964

Organizational Leadership

FOUNDATION FOR DEEP ECOLOGY

Private foundation focused on activism, grantmaking, and an in-house publishing program; incorporated in California.

Directors

Douglas Tompkins
A wilderness advocate, mountaineer, skier, farmer, conservation activist, and businessman, Doug Tompkins founded The North Face and cofounded Esprit de Corp.

Kristine Tompkins
Former long-time CEO of Patagonia clothing company, Kris Tompkins is the founder and president of the nonprofit conservation group Conservacion Patagonica, and was the key figure behind the creation of Argentina's Monte Leon National Park.

Quincey Tompkins Imhoff
Former Foundation for Deep Ecology executive director Quincey Imhoff runs a yoga center in northern California and is active on a wide variety of local projects in the community where she lives with her family.

Debbie Ryker
The former chief financial officer at Esprit de Corp., Debbie Ryker has served as finance director for all of Doug and Kris Tompkins's conservation projects during the past two decades.

CONSERVATION LAND TRUST

Private operating foundation focused on land conservation; incorporated in California.

Directors

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Kristine Tompkins

Quincey Tompkins Imhoff

Debbie Ryker

Peter Buckley
A kayaker, surfer, and environmental philanthropist, Peter is a founder of the Center for Ecoliteracy, the Greenwood School, and the David Brower Center, a facility designed to inspire and support the activist community.

George Wuerthner
George Wuerthner is an ecologist, writer, photographer, and long-time conservation activist who has written more than thirty books on natural areas, wildlife, and environmental issues.

Tom Butler
A Vermont-based writer and activist focused on biodiversity conservation, Tom Butler is a founding board member and current president of the Northeast Wilderness Trust, a regional land trust that preserves forever-wild landscapes.

CONSERVATION LAND TRUST–ARGENTINA

Subsidiary of the private foundation dedicated to land and wildlife conservation; incorporated in Argentina.

Directors

Douglas Tompkins

Eduardo Chorén
Trained in economics and accounting at the Argentine University of Enterprise, Eduardo Chorén is a businessman and partner in Pampa Partners SA, a green real estate company that restores and markets agricultural properties. He lives with his family on a farm in Entre Rios Province, Argentina.

Sofia Heinonen
A wildlife biologist, Sofia Heinonen has managed the conservation efforts based in Ibera since 2005. Before that, she worked for fifteen years with the national parks administration office in Iguazu on the management of national parks in northeastern Argentina.

Laura Fernandez
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FUNDACION PUMALIN

Nongovernmental organization dedicated to the creation, management, and administration of Pumalin Park; incorporated in Chile.

Directors*

Carolina Morgado
President of Fundacion Pumalin and Fundacion Yendegaia, Carolina Morgado has been a dedicated environmental activist for more than twenty-five years and is now working actively on the Patagonia Sin Represas campaign. She lives with her daughter in Puerto Varas, Chile.

Douglas Tompkins

Kristine Tompkins

Francisco Calabi
Trained as an agronomist, Francisco Calabi is an organic farmer who manages the Vodudahue Farm in the Comau Fjord of south Chile, where he lives with his wife and daughter.

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Juan Luis Ysern served as the bishop of Chiloe and continental Chiloe (the area of Pumalin Park) for twenty-four years. As an environmental activist, he involved the church in opposition to salmon aquaculture. He now lives in Santiago, where he works for Caritas Chile, a Catholic social work group.

Manfred Max-Neef (university representative)
One of the best-known Chilean economists, Manfred Max-Neef won the 1983 Right Livelihood Award (the Alternative Nobel Prize) for his writings about human-scale economies. He lives in Valdivia with his wife.

* A government representative holds the seventh Fundacion Pumalin director seat; that individual is periodically appointed by the governmental administration in office.

Organizational Leadership

FUNDACION YENDEGAIA

Nongovernmental organization dedicated to land conservation and stewardship of a private nature park in Tierra del Fuego; incorporated in Chile.

Directors

Carolina Morgado

Rodrigo Noriega
A former river and trekking guide in Patagonia, Rodrigo Noriega has been the bush pilot for the Pumalin project for a dozen years. He lives on the Pillan Farm, in the center of Pumalin Park, with his wife and two children.

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Trained as an accountant, Luis Toro serves as chief financial officer for the Conservation Land Trust, Conservacion Patagonica, and Tompkins family projects in Chile. A fanatic runner and soccer player, he lives in Puerto Montt, Chile, with his family.

Carmen Joost
Carmen Joost has worked with the Pumalin project for seventeen years; she is in charge of the administrative office in Puerto Varas. A skilled belly-dancer, she lives in Puerto Montt with her children.

Hernan Mladinic
Trained as a sociologist with a masters degree in environmental studies, Hernan Mladinic serves as executive director of Fundacion Pumalin, after years working in government and for various NGOs. He lives on a farm outside of Puerto Varas with his wife.

Carlos Cuevas
An ecologist with a degree in forestry, Carlos Cuevas is a pioneer of the forest conservation movement in Chile. For thirty-five years he has worked on the creation of public and private protected areas and has assisted organizations that promote the preservation of ecosystems throughout the country.

Victor Manuel Gallegos
A long-time resident of Chile's southerly Magellanes Region, Victor Manuel Gallegos is a sheep rancher and friend of conservation efforts.

CONSERVACION PATAGONICA

Publicly supported charity dedicated to land conservation in the Patagonia region of Chile and Argentina; incorporated in California.

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The vice president of environmental initiatives at Patagonia, Inc., Rick Ridgeway is one of the world's foremost mountaineers and adventurers, and the author of numerous books.

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The Chouinards are owners of the clothing company Patagonia, Inc. and well-known conservation philanthropists who have oriented their company to be a model for corporate responsibility.

CONSERVACION PATAGONICA–CHILE

Subsidiary of the nongovernmental organization; incorporated in Chile.

Directors

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Rodrigo Noriega

Luis Toro

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Thomas Lovejoy is currently a professor at George Mason University and serves as the Heinz Center Biodiversity Chair. He was formerly the World Bank's Chief Biodiversity Advisor and Lead Specialist for Environment for Latin America and the Caribbean, and Senior Advisor to the President of the United Nations Foundation. He conceived the idea for the Minimum Critical Size of Ecosystems project, originated the concept of debt-for-nature swaps, and is the founder of the public television series *Nature*. In 2001 he was awarded the Tyler Prize for Environmental Achievement and in 2009 received the BBVA Foundations Frontiers of Knowledge Award in Ecology and Conservation Biology. Dr. Lovejoy served on science and environmental councils or committees under the Reagan, Bush, and Clinton administrations.

Rodolfo Gajardo Michell, a professor of biology and forestry at the University of Chile, specializes in applied ecology and conservation. His research has focused on mapping and studying trees and plants within ecosystems. He has been published in numerous scientific and technical journals and is especially known for his book *Natural Vegetation of Chile, Classification and Geographic Distribution*. At the University of Chile, he helped create and develop the Masters in Forestry and Nature Conservation, serving as the program's first director. He has served on numerous national and international committees as an expert in applied ecology, endangered species, national parks, and restoration ecology.

Stuart Pimm is Doris Duke Chair of Conservation Ecology at the Nicholas School of the Environment at Duke University, and one of the most-cited scientists working in the field of conservation biology. He is the author of *The World According to Pimm: A Scientist Audits the Earth*, and many articles in technical and popular journals including *New Scientist*, *Scientific American*, *Nature*, and *Science*. His awards include a Pew Scholarship for Conservation and the Environment and an Aldo Leopold Leadership Fellowship. In 2004, Pimm was elected to the American Academy of Arts and Sciences.

John W. Terborgh is a James B. Duke Professor of Environmental Science and is co-director of the Center for Tropical Conservation at Duke University. He is a member of the National Academy of Science. An authority on avian and mammalian ecology in Neotropical forests, Dr. Terborgh has published numerous articles and books on conservation themes. Since 1973 he has operated a field station in Peru's Manu National Park where he has overseen the research of more than a hundred investigators. In 1992 he was awarded a John D. and Catherine T. MacArthur Fellowship in recognition of his distinguished work in tropical ecology, and in 1996 he was awarded the National Academy of Science Daniel Giraud Elliot medal for his research and for his book *Diversity and the Tropical Rainforest*. He has served on several boards and advisory committees related to conservation, including the Wildlands Project, Cultural Survival, The Nature Conservancy, World Wildlife Fund, and both the Primate and Ecology Specialist groups of the International Union for the Conservation of Nature.

Juan C. Torres-Mura, a biologist and ecologist, has served as an investigator at the National Museum of Natural History of Santiago since 1987; he has also taught at several Chilean universities. He has published over one hundred articles in Chilean and international scientific journals, popular magazines, and books. He has participated in more than fifty scientific congresses and belongs to numerous scientific societies. Torres-Mura has also served as the editor of publications such as the *Revista Chilena de Historia Natural*. He is member of the Scientific Committee of Cabo de Hornos Reserve, the National Committee of Wetlands, and the Committee of the Wild Species Classification. His research focuses on Chile's wildlife, natural history, and ecosystems, leading him to work in diverse regions of Chile, from Visviri in the Andean highlands to Cabo de Hornos and oceanic islands.

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