

Astronomers regard Chile's Atacama Desert as one of the world's finest sites for stargazing. Credit: BABAK TAFRESHI/National Geographic Creative

SOUTH STAR

CHILE AND THE FUTURE OF CONSERVATION FINANCE

On September 27 to 29, 2016, the International Land Conservation Network (ILCN), a project of the Lincoln Institute of Land Policy, hosted the “Workshop on Emerging Innovations in Conservation Finance” at Las Majadas de Pirque, near Santiago, Chile. The workshop drew 63 participants from eight countries, who came together to discuss tools and concepts that are strengthening conservation finance in the Western Hemisphere and beyond.

The policies, practices, and case studies discussed at the workshop represented a broad spectrum of innovative financing mechanisms to address challenges posed by development and climate change. Topics included value capture in Latin America; the restructuring of insurance markets to make cities more resilient and financially sustainable in the face of intensified storm events; financial incentives for conservation as written into Chilean and U.S. law; compensatory mitigation; conservation finance-oriented networks; the role of civil society and conservation finance in carrying out the 2015 Paris Climate Agreement; the potential role that capital markets

might play in addressing climate change; and, particularly, Chile's emerging global leadership in land conservation.

The workshop organizers greatly appreciate the productive contributions of all participants, as well as the collaboration of conference partners: the David Rockefeller Center for Latin American Studies at Harvard University; Fundación Robles de Cantillana; the Harvard Forest, Harvard University; Las Majadas de Pirque; Qué Pasa; and Templado. The organizers also invite readers to access the official workshop proceedings and to learn more about the ILCN, which is connecting people and organizations around the world that are accelerating voluntary private and civic sector action to protect and steward land and water resources, at www.landconservationnetwork.org.

Below follows renowned author Tony Hiss's experience at the workshop and observations of Chile's stunning natural resources and inspiring conservation efforts.

—Emily Myron, Project Manager, ILCN

By Tony Hiss

FOR NORTH AMERICAN CONSERVATIONISTS, EVEN A WHIRLWIND VISIT TO CHILE CAN FEEL LIKE ENCOURAGEMENT FROM THE FUTURE—an encounter with a strong beam of light shining northward. That's thanks to the nature of the place, a showcase of spectacular landscapes neatly arranged in a tall, tight stack along the country's narrow ribbon of land between the Pacific Ocean and the Andes Mountains. Equally it has to do with the people in that country and what groups and individuals have been doing during five-and-a-half centuries to protect these indispensable landscapes.

At a meeting I got to attend last fall at Las Majadas de Pirque, a kind of marzipan palace-turned-conference center outside Santiago, it became clear that a North and South American partnership, which got its start during several decades of quiet collaborations among conservationists in the United States and Chile, is

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already creating a sort of hemispheric force field of conservation concern. As a result, the partnership's co-anchor, Chile, a country whose name according to one derivation means “ends of the earth,” feels like a close colleague though it remains more than 10 hours away from New York City on a plane.

Building on this affinity, the meeting—called the “Workshop on Emerging Innovations in Conservation Finance” and hosted by the Lincoln Institute's International Land Conservation

Network (ILCN)—gathered dozens of conservationists, officials, and investors from both countries, with further representation from around the Western Hemisphere, to think through an increasingly urgent challenge: Given how fast the biosphere is warming and changing, governments alone can't afford the trillions of dollars needed to secure and then care for the places that have to be held onto for all time to save biodiversity.

Despite the severity of the problem, it's a huge jump forward when two countries that strongly support conservation—and each with so much worthy of conserving—team up to find new solutions. “What good timing,” Hari Balasubramanian, a Canadian consultant who thinks about the business value of conservation, said of the three-day conference. “Conservationists have always been in the perpetuity business. And now we need to work even harder at financing and managing protected lands so they will last.”

Laura Johnson, director of the ILCN, concurred: “The idea that we can develop new tools for financing big visions for conservation is still relatively recent. Can we find the resources needed to meet the daunting challenge of creating lasting land and water conservation? The conference was intended to help answer that question.”

Chile's Special Nature

Of course, not every visitor gets to stay in such an elegant setting as Las Majadas, but it's easy for North Americans to feel at home in Chile—and not just because of the abundance of bookstores in Santiago or the gleaming high-rises in the city's financial center, nicknamed “Sanhattan.” The countryside's succession of landscapes and climates eerily echo those along our own Pacific coast west of the Sierras—though rather than being mirror images of each other, the relationship between the two countries is more like the upside-down reflection you'd see if you were standing on the edge of a lake: with deserts in the north, Patagonian glaciers and fjords far in the south, and in between a sunny Mediterranean area, like that of central and southern California, and a foggy temperate rainforest region, like in Oregon or Washington. Our fall is their spring. And Chile is as long as the distance from New York to San Francisco, but its western and eastern boundaries—the Pacific and the ridge line of the Andes—are always closer than the distance between Manhattan and Albany, New York.

Yet Chile's “sister landscapes” can still be humbling to North Americans: Chile doesn't just have deserts, it has the world's driest desert—the Atacama, known as Mars on Earth, with clear

night skies that will make it the first “starlight reserve” in the Western Hemisphere. Within a year, this professional astronomer's paradise will be home to 70 percent of the world's great telescopes: an ELT (Extremely Large Telescope) the size of a football stadium now under construction will supplement an existing VLT (Very Large Telescope), amid talk of an OWL (an Overwhelmingly Large Telescope) that could someday, according to the European Southern Observatory, “revolutionize our perception of the universe as much as Galileo's telescope did.”

In the more southerly Valdivian temperate rainforest region, foggy and chilly and with dense understories of ferns and bamboos (our “cold jungle,” as Pablo Neruda, the Nobel Prize-winning Chilean poet, called it, “fragrant, silent, tangled”), many of the trees are among the world's most ancient. “Today,” said one awed visitor (Ken Wilcox, author of *Chile's Native Forests: A Conservation Legacy*), “the opportunity to walk for days among living things as old as the Sphinx is possible only in Chile.”

The monarch of these cathedral-like forests of evergreens—*siempreverdes*, in Spanish—is the alerce, a shaggier, slightly shorter but much longer-lived cousin of the North American giant sequoia. Even more striking is the 260-foot-tall monkey puzzle tree, which like the alerce towers over the surrounding forest canopy, where its dead-straight, spindly trunk is topped by an intricately snarled crown of thickly overlapping branches entirely covered with sharp, prickly leaves. Think of an umbrella with too many ribs blown inside out by a thunderstorm. “It would puzzle a monkey to climb that,” said Victorian lawyer Charles Austin—though it might be more accurate to call it a dinosaur puzzle tree since there are no monkeys in Chile, and the tree's thorny leaves, unchanged over eons, evolved to repel the giant herbivore reptiles that roamed Gondwana, the ancient southern supercontinent that began to break up 180 million years ago.

Then there's Patagonia. The sparsely populated southernmost third of Chile is a place of uncompromising immensities and what's been called “extreme geography,” where everything is



Araucaria araucana—the national tree of Chile, commonly known as the monkey puzzle—is an ancient species often described as a living fossil for its close resemblance to its prehistoric ancestors. Credit: GERRY ELLIS/ MINDEN PICTURES/National Geographic Creative

“Today, the opportunity to walk for days among living things as old as the Sphinx is possible only in Chile.”

outsized and stunning—peaks, glaciers, islands, fjords, forests. The landscapes look retouched in photographs and leave even the best writers gasping for adequate descriptions. The iconic logo of the Patagonia clothing line—which I had once supposed to be a fanciful, Shangri-La concoction of jagged, imaginary peaks silhouetted against bands of unlikely-looking orange and purple horizontal clouds—is actually a rather oversimplified, understated, subdued sketch. In fact, the mountains, clouds, and light are all quite real. And the graphic doesn't begin to convey the 5,000-square mile Southern Patagonian Ice Cap right next to the ridgeline (an ice cap is to a glacier as a paragraph is to a word), or what one mountaineer, Gregory Crouch, author of *Enduring Patagonia*, calls “the wind, the gusting wind, the ceaseless, ceaseless wind.” It's a landscape still so unknown that for 50 miles to the south the border separating Chile and Argentina has yet to be established. Many visitors to the region sense a return to a time just after the beginning of things.

Chile's Valdivian rainforest is home to some of the most ancient trees on earth, including the alerce, which can live for 3,600 years. Credit: Kike Calvo/National Geographic/Getty Images



Threats to the Landscape

This extraordinary country was a fitting backdrop for the energy in our Las Majadas conference room. The passion that these extravagant landscapes have evoked in Chileans is transformational, enduring, and contagious. Conference organizer James N. Levitt, manager of land conservation programs at the Lincoln Institute, summed up the feeling in all of us when he said that Chile's "destined to become one of the most important green focus points on the planet."

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Of course, it's a complex story with overlapping currents. For the country's most powerful industry, mining—a mainstay of the national economy—the landscape has been a husk, something to peel away to reveal something else with greater value: copper. Chile exports a third of the world's copper and depends heavily on the \$11 billion it brings in annually for the government. Since Spanish colonial times, what's underground has always trumped what's on the ground. Neruda said, "If you haven't been in a Chilean forest, you don't know this planet," yet until recently a forest would be felled if it impeded the development of a mine. It wasn't until this decade that a Chilean court ruled that a tree-clad, Mediterranean slope not far from Santiago has more value standing than excavated; protected in 2013, that area is now the San Juan de Piche Nature Sanctuary. During a visit there, we got to crush a pungent, clean-smelling leaf from a peumo tree, a 65-foot evergreen with cracked gray bark, allowing us to participate in an experience unforgettably captured by Neruda:

I broke a glossy woodland leaf: a sweet aroma of cut edges brushed me like a deep wing that flew from the earth, from afar, from never... I thought you're my entire

land: my flag must have a peumo's aroma when it unfurls, a smell of frontiers that suddenly enter you with the entire country in their current.

At the same time, environmentalism has been part of a national healing process in a country still emerging from the shadow of what it calls "a different 9/11"—September 11, 1973, the day the Chilean military overthrew the democratically elected socialist government and set up a brutal dictatorship that lasted 17 years. Hernando Muñoz, the country's current foreign minister, has written that for many it was "a crushing loss of innocence. We had believed that our country was different from the rest of Latin America and could not fall prey to the horrors of dictatorship." Conservation issues were one way for the country to start peacefully putting itself back to rights: widespread demonstrations in 1976 led to the alerce being proclaimed a national monument. "The military called us *sandías*—watermelons—green on the outside, red on the inside," Raphael Asenjo, a veteran of those days, said at our meeting. He's now chief justice of the new environmental court in Santiago. "But if we went to court, it was harder for judges to rule against us since we weren't political." The military, which championed free market reforms, unintentionally rallied new conservationists by subsidizing owners of ancient, slow-growing forests to chop down hundreds of thousands of acres of these trees—repositories, according to Rick Klein, founder of Ancient Forest International, of the oldest genetic information above water—and replace them with monoculture plantations of imported North American pines. The substitute trees are such speedy growers they're ready to be mashed into wood pulp for export in as little as seven years. "Wood is Chile's new copper," was a boast of the early 1980s.

The most dramatic conservation successes have come since the restoration of democracy in 1990—and they continue. By happy chance, I was seated next to Foreign Minister Muñoz, now the country's champion of marine protection, on my flight down to Santiago. (He was one of the lucky ones during the dictatorship; his only scar



The peaks of Los Cuernos reflect on Lake Pehoé in Torres del Paine National Park in Patagonia, Chile. Credit: DMITRY PICHUGIN / 500PX/National Geographic

from a single torture session is a finger that never healed properly.) Chile thinks of itself as a "tri-continental country" with claims on Antarctica and sovereignty over the Desventuradas, or Unfortunate Islands, a two-day boat ride west from the mainland, as well as over Easter Island, another five days farther away. In 2015, Chile created a no-take marine reserve the size of Italy around the Unfortunates. Illegal fishing is now, Muñoz told me, the world's third most profitable criminal activity (after drugs and illegal arms sales). A much bigger 278,000-square mile Marine Protected Area (MPA) around Easter Island being developed with the local Polynesian community will be one of the largest in the world. Professional divers who've started exploring the Desventuradas waters liken the area to a Patagonia of the deep: "The walls of brightly colored fish make it nearly impossible to see the hand in front of your face. It's only when we come to pristine places that we are reminded how it used to be before humans."

Global Conservation Leader

The first protectors of this exceptional country were the indigenous Mapuche people from

south-central Chile and southwestern Argentina. These canny warriors kept three successive armies at bay for 400 years—forces sent by the Incas and then the Spanish and finally the newly independent Chilean government—bottling up a growing population in the center of the country, south of the northern deserts. Much of Patagonia had no permanent settlements until the 20th century, and today 85 percent of Chileans still live in the Central Valley, where land in between big cities like Santiago is intensively farmed. Longtime vineyards are growing in size and number, joined more recently by an array of avocado orchards spreading up hillsides like sprawling subdivisions ("avo-condos," we dubbed them as we drove past).

With 19 percent of its land in a designated public park or preserve (compared to 14 percent in the U.S.), Chile is a global conservation leader. But 85 percent of Chile's national parks and other protected areas are down south, while only one percent of the crowded center has that kind of security, though it is a special landscape in its own right, as one of the world's five species-rich and distinctively Mediterranean ecoregions. Considering that 90 percent of all the land outside the park system is privately owned, this might sound like a discouraging prospect for

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conservation but in fact points the way to the future, thanks to a brilliant and unprecedented change to the laws of the country.

EL DERECHO REAL

Just months before our conference, after eight years of persuasion and debate, the Chilean Congress unanimously passed the *derecho real de conservación*, or “real right of conservation”—a new kind of property right, that had, as Raphael Asenjo remembers, been considered “a crazy idea.” The law invites Chilean citizens to participate in conservation by setting up PPAs (privately protected areas) that will now have the same durability and legal standing as public parks. It democratizes the perpetuity business by making it a personal, voluntary act—and is also considerably cheaper. “We do not need to buy up the land to save it,” William H. Whyte wrote in *The Last Landscape*, a reverberating 1968 open space manifesto, pointing to “the ancient device of the easement.” Since medieval times, Whyte said, land ownership has been understood to be a “bundle of rights,” which allows property owners to peel off the right to develop their land and then separately sell or donate that right for less than the full purchase price of a property to a parks agency or a nonprofit group called a land trust. In the decades since Whyte’s clarion call, 24,700,000 acres of the U.S. landscape (an area nearly as big as Virginia) have come under easement. But though the idea has been spreading globally, the remedy wasn’t available in Chile because it’s a civil law country, such as Italy or Switzerland—unlike the U.S., which is a common law country.

Common law in the United States and other English-speaking countries got its start in England after the Norman Conquest, when the new government attempted to coordinate



Pumalín Park encompasses Andean peaks, Pacific coastline, and a quarter of the country’s stock of ancient alerce trees within 715,000 acres run by Tompkins Conservation. Credit: Tompkins Conservation

regional customs by giving judges considerable leeway to decide what it was the customs had in common—making judges the main source of law. By contrast, the rest of Europe looked to rules that had been established for all time, it was thought, by the Byzantine emperor Justinian in a 6th-century compilation of Roman law. Under civil law, a decision not to build on a piece of land is considered a restriction on the main purpose of holding property, which is to make money for its owner. But recently, Jaime Ubilla, a Santiago attorney with global experience (he has a Tokyo MA, a University of Edinburgh Ph.D., and also speaks Mandarin), proposed that a *derecho real de conservación* is consistent with this age-old understanding, because modern conservation biology has shown that undeveloped land has ever-increasing value when kept in its natural state. So rather than constraining landowners, not building frees up a way for them to amass natural capital. The result is a law and a rationale that other civil law countries can now adopt.

In Chile, the hope is that one of the first areas to benefit from a *derecho real* will be the San Juan de Piche Nature Sanctuary, whose owners went into debt to challenge the mining interests in court. And the timing of that arrangement might just coincide with another unprecedented development in Chilean private land conservation—the impending donation by a single landowner of a gargantuan, all-in-one-go contribution to the country’s national park system.

TOMPKINS CONSERVATION

It began as a lark: young North Americans in a beat-up van—“conquistadors of the useless,” as they later called themselves—driving through South America in 1968 for another six months of “peak experience” skiing, surfing, and climbing before “coming to grips with entering the industrial work force.” They climbed Fitz Roy, the mountain now on the Patagonia label: one of them was Yvon Chouinard, who later founded the clothing company in 1973; another was Douglas Tompkins, also in the clothing business, who had started and just sold The North Face (financing the trip) and who, when he himself arrived back in California, founded Esprit, which he sold in 1989 to become what his detractors called an “eco-baron.” Tompkins moved to Chile and, in 1993, married Kristine Tompkins, until then Chouinard’s CEO at Patagonia. They bought two million acres of wild land in Chilean and Argentine Patagonia in chunks of tens or hundreds of thousands of acres, making them the largest private landowners in the world. Their aim was to build yet another brand, this one for perpetuity. The strategy: feed their land into Chile’s national

park system through a series of deals, cumulatively establishing it as an irresistible force—a “gold standard” of protected places Chile will still be holding in trust for the world 200 years from now.

Doug Tompkins unfortunately died in a freak kayak accident over a year ago, so it’s been left to Kris Tompkins to complete their project, which will be announced within the year, according to a report at our conference from Hernán Mladinic, a sociologist and executive director of one of the future national parks and the Tompkins team member negotiating final details with the Chilean government. Kris Tompkins will donate her last million acres, the biggest-ever single donation of land to a country; in return, the government will add 9.1 million acres of state land, creating five new national parks and expanding three others—all in the same moment. A couple of the new parks have until now been Tompkins showcases: Pumalín, which shelters a quarter of the country’s remaining stands of never-logged alerce, and Patagonia Park, the largest grassland restoration project in the world, along with its keystone species like pumas and Andean condors—a project that also, as Kris Tompkins



Pumalín Park will soon become part of Chile’s national park system. Credit: Antonio Vizcaino, America Natural

says, can remind people “what the world used to be like everywhere and might be again.”

What does conservation look like from a 23rd-century perspective? In an unusually candid talk Kris Tompkins gave at Yale last spring, she explained that she and her husband had always thought at the largest scale. “Leverage for us is everything—every time you have a transaction in front of you, you’re looking at the possibilities of expansion, thinking where is the hustle in there to leverage?” They took the long view in order to plant an even farther-reaching vision. “Considering that you’re spending a few hundred million dollars on protecting land, you want to make sure your investment is as protected as possible. . . . I’m not going to work that hard if something’s only going to last 25 to 50 years.”

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They’ve always thought of themselves as developers, though on a different trajectory. This means working among people and within them, showing them that parks are a competitive business (“more profitable than copper,” as Mladinic says), but at the same time doing something internal that only takes effect gradually. In Kris Tompkins’ words: “When you’re dealing in large landscapes, the number-one thing you have to do, before you leave or kick the bucket, is get it so that the citizenry itself has fallen in love with and therefore become protective of their national park system. That takes maybe a generation, a generation and a half. A park’s a huge money-maker, but much more important, it becomes a point of pride. And then if some knucklehead comes along, which they do every so often, and attempts to fill the edges of, say, Olympic National Park, people will go berserk.”

The Cost of Saving Paradise

For almost every species, the natural world is a kind of fixer-upper rather than a ready-made dream home—a storehouse of raw materials that can be raided and refashioned. So we have birds’ nests and beaver dams, changes to surroundings that make life easier and strengthen the odds of survival. Medical anthropologists call such species-specific infrastructure *ipsefacts*—meaning “things they make themselves.” It goes beyond the realm of artifacts, our word for the changes humans make to the environment, by showing that what we do is a shared impulse; the urge to feather one’s nest is universal and inevitable. But weaving twigs and feathers into a small, shallow bowl has a minimal effect on the environment, and even beaver dams are disruptive and productive at the same time, creating large wetlands, upstream and down, that benefit many more species than they harm—whereas our reshaping of the world has brought Garden of Eden-like living conditions to many while casting out too many others and even destroying paradise.

One of the thorniest and most critical subjects at the conference came up during conversations about paying for perpetuity. Government and private donors have been traditional mainstays of land conservation, but they’ve pulled back since the worldwide 2008 recession. Getting the business and investment community more involved has to be the next step. They control \$16 to \$18 trillion in global savings, which, as David Boghossian, managing director of a Massachusetts-based socially responsible investment firm, told us, makes them “the most potent force for change available.” This is 30 times more than what’s in the hands of generous global philanthropists—money that seems like “decimal dust” in comparison.

Boghossian spelled this out in a presentation called “Making Impact Investment Boring.” Impact investing, a term only coined within the last decade, means hoping to do well financially while also doing the world a good turn. It’s a growing trend but remains years away from dullness and dependability—Boghossian’s



Douglas Tompkins fell in love with Chile during a 1968 expedition that included a trek up Mount Fitz Roy, which his climbing companion Yron Chouinard later memorialized in the Patagonia label. Credit: Art Wolfe

desired state for impact investing, as an everyday transaction that feels as safe and comfortable as opening a bank account.

The thorn has to do with the “opportunity cost,” the likelihood that an investor can make more money by creating an adverse impact on the landscape, since in this regard businesses have traditionally been set up on a semi-ipsefactual basis. Under business as usual, any inadvertent damage to the environment won’t affect the bottom line. It’s an externality, considered an acceptable trade-off; the planet takes the risk, not the investor. In this regard humanity has acted like other species, as if the landscapes we tinker with are as inexhaustible as the sun above, as unchangeable as gravity.

But thirty years ago, it began to sink in that the world has only a finite supply of raw materials, and sustainability became a watchword. Ten years ago, as climate change turned into something people noticed firsthand, it has been hitting home that long before oil and coal run out, their widespread use will warm the planet in a way that could compromise everything—“the landscapes, the waterscapes, and the skies that provide our common foundation,” Levitt said.

Until now, conservationists and the business community have always shared a kind of long and unspoken chess game. Businesses use up certain pieces of land before conservationists can counter by putting flanking pieces off limits, in effect taking them out of the game. But now it’s not only the players at risk; it’s the room where the game is being played. The externalities are coming indoors, and the business community will need to bolster conservation efforts just to protect its own interests.

That is what we experienced at the conference—a shift in the nature of reality, a realignment of focus that was more than just a shift in the underpinnings of conservation finance.

A rose beneath the thorn: if it takes a village to raise a child, maybe it’ll take a hemisphere to shepherd the environment, with business leaders and conservationists working together to save the planet. □

Tony Hiss was a *New Yorker* staff writer for more than 30 years and is now a visiting scholar at New York University. He is the author of 13 books, including *The Experience of Place* and most recently *In Motion: The Experience of Travel*.