Introduction

"Our lakes are not natural," Javier Molina told me as we sat by a soccer field perched in the foothills above the city of Cochabamba, Bolivia on a sparkling day in the austral winter of 2011. "They were built," he explained, "in the time of *pongueaje* by *colono* labor."[1] Molina was an elected leader of the peasant union of Tirani, a rapidly urbanizing agricultural community nestled in the foothills of the Tunari Mountains that crown the northern rim of Cochabamba's Central Valley. The community holds rights to two mountain lakes, San Juan and San Pablito, which provide irrigation water to its corn, bean, alfalfa, and flower fields and drinking water to its residents. A legacy of Bolivia's coercive unpaid labor on estates (*pongueaje*), the lakes also exemplify water users' ongoing efforts to defend and establish autonomous collective control over the Cochabamba region's water sources. Tirani splits rights to the lakes with Cochabamba's municipal water company SEMAPA (Servicio Municipal de Agua Potable y Alcantarillado), but Tirani's share is hard-won community property.

Every year for more than a century, Tirani community members have climbed the steep mountainside, laden with tools, supplies, and provisions, to maintain the dams and canals that capture and channel lake water to their fields. Hacienda *colonos*, estate workers with usufruct rights to small plots of land, built the lakes' dams and canals at the turn of the twentieth century. Over the next five decades, *colonos* maintained and expanded this hydraulic infrastructure on behalf of, and mostly for the benefit of, a series of *patrones*, the owners of large estates called haciendas. After the 1952 Bolivian revolution, Tirani *colonos* were among the tens of thousands of Bolivian estate workers who won hacienda land, water sources, and irrigation infrastructure through unauthorized seizures and government-

sponsored agrarian reform.[2] From that time forward, Tirani community members have claimed the San Juan Lakes and accompanying irrigation infrastructure as community property, even as they share rights to the lakes with the city. On their annual pilgrimage up the mountain, ex-*colono* communities like Tirani not only make necessary repairs, they also assert their right to own, control, and use water sources and systems they inherited from their ancestors. Their treks and labor make their property claims visible to state officials and their neighbors and constitute the basis for these claims.

The shift from hacienda ownership to community and municipal ownership of the San Juan Lakes was part of a broader democratization of water access and governance in Cochabamba in the twentieth century. At the beginning of the century, rural estate owners hoarded water sources that the growing urban population, independent smallholders, and hacienda *colonos* needed for irrigation and drinking water. By the turn of the twenty-first century, in contrast, a plethora of public water utilities and water-using communities owned and controlled water sources like the San Juan Lakes that had been hacienda property a century before. This book tells the story of the struggle for the democratization of water in Cochabamba over more than a century that brought about that sea change. It argues that democratization owed to the efforts of communities of water users who transformed Cochabamba's water tenure regime in the twentieth century through their labor, planning, protest, purchases, and seizures of previously hoarded water sources.

The watershed moment in this process came after the 1952 revolution, when hacienda *colonos* like Javier Molina's grandparents won land and water rights away from hacienda owners. These new land and water owners joined independent smallholder (*piquero*) communities who already held water rights and the municipal water company as water owners. Over the seven decades after the revolution, the constellation of water owners grew to include peripheral neighborhood residents who built independent water systems and acquired rights to mountain lakes and mountainside springs. Piquero communities, ex-*colono* peasant unions, and neighborhood water cooperatives all performed collective labor in the mountains to maintain their access and rights to water sources like the San Juan Lakes in these years. But in early 2000, instead of traveling up the mountainside to sustain their flows, they headed down into the core of the valley to do battle in what became known as the Cochabamba Water War.

A CENTURY OF STRUGGLE

In April 2000, Molina and other Tirani *comunarios* joined a massive popular uprising against water privatization that shut down the city of Cochabamba. Local groups had been organizing for several months against the national government's

decision to privatize water in the Cochabamba Valley. In late 1999 the government granted a contract to Aguas del Tunari, a consortium of companies that included the US construction giant Bechtel, to administer water sources and provision in the department capital and surrounding valleys. The new company dramatically increased water rates for municipal customers and took over independent drinking water systems in periurban neighborhoods and irrigation networks in agricultural communities. In response, protestors from across the region occupied city streets, erected barricades, and held assemblies to make proposals and decisions. Rather than negotiate, the government dispatched soldiers and police who unleashed tear gas, clubs, and bullets, leaving a seventeen-year-old bystander dead and more than one hundred wounded. Undeterred, the protestors regrouped and their numbers grew.[3]

Remarkably, the protestors won. In response to the uprising, the Bolivian Congress modified a November 1999 water law that permitted the state to grant exclusive water rights to private firms, and Hugo Banzer, the former dictator turned democratically elected president, canceled the government's contract with Aguas del Tunari. News of the Cochabamba Water War quickly spread around the globe. Global justice activists celebrated Cochabamba's victory against neoliberal privatization policies, and within days the movement's principal spokesperson, factory union leader Oscar Olivera, traveled to Washington, DC, to join protests against the World Bank and the International Monetary Fund. Water privatization had sparked protests from Atlanta to Johannesburg to Delhi to Jakarta, but Cochabambinos were the first to overturn it.[4] Anti-privatization activists and pro-privatization international financial institutions the world over took notice, whether to invigorate their own anti-privatization movements or to retool privatization strategies.

Until the Water War, international financial institutions like the World Bank had held Bolivia up as a neoliberal success story. Although countries like Chile and Argentina had begun neoliberal economic restructuring under dictatorships, Bolivia was the first to do so under a democratically elected government.[5] In the 1990s the Bolivian government had partially privatized a series of state-owned enterprises (SOEs), including the national oil and gas, telecommunications, airline, smelting, power generation, and railroad companies, the country's six largest.[6] Proponents of this economic model promised that privatization would attract private and foreign capital to improve and expand services like water provision. Instead, privatization repeatedly led to mass layoffs and rate and fare hikes. The earlier SOE privatizations had sparked protests, especially from the companies' unionized workforces, but water privatization was the first to inspire a militant mass uprising that changed the course of national (and international) politics.

The Water War set off five years of what political scientist Jeffery Webber has called a "left-indigenous insurrectionary cycle" against neoliberal economic poli-

cies, parties, and politicians. Mexican social theorist Raquel Gutiérrez called these years of rebellion, from 2000 to 2005, a "community-popular" *pachakuti*, a Quechua term meaning an upheaval of time and space. Cochabamba water activists' call for a constituent assembly to refound Bolivia as a more just and democratic nation, which echoed an earlier proposal by lowland indigenous groups, became a rallying cry of social movements across the country as protests spread and intensified. Five years of rallies, strikes, blockades, and marches toppled two presidents and paved the way for the election of Evo Morales Ayma, the country's first indigenous president, in December 2005.[7] Morales and his Movimiento al Socialismo (MAS) party government joined Latin America's so-called Pink Tide, a wave of left-leaning vaguely socialist governments elected in Venezuela (1998), Brazil (2002), Argentina (2003), Uruguay (2004), Chile (2006), Ecuador (2006), Paraguay (2008), and beyond on surges of popular mobilization.

In his inauguration speech, Morales vowed to end five hundred years of foreign plunder of the nation's resources and to guarantee a form of autonomy for indigenous peoples. He blasted his predecessors for privatizing basic services like water, avowing that "water is a natural resource that we cannot live without and so cannot be a private business."[8] Morales's opposition to privatization was clear. But the sincerity of his commitment to autonomy would be tested over the almost fourteen years of his presidency. The Water War directly contributed to Morales's election. But whether the MAS-led state would respect indigenous communities, peasant and irrigator unions, and urban peripheral neighborhoods' control over water sources and systems remained to be seen.

The outcome of Cochabamba's Water War is at first glance surprising. After all, at the start of the conflict in 1999, Cochabambinos were up against a former dictator, the national army and police forces, the World Bank and the Inter-American Development Bank, and a neoliberal orthodoxy that had taken hold across Latin America and around the world. To explain their success, many participants and observers highlighted the broad cross-class and inter-regional makeup of the Coordinadora de Defensa del Agua y de la Vida (Coordinating Committee for the Defense of Water and Life) that organized the protests. Raquel Gutiérrez, who helped found the Tupac Katari Guerilla Army in the 1980s and later participated in the 2000 Water War, credited the Coordinadora's "noninstitutionality," its loose organizational structure, and its decentralized decision-making practices.[9] Coordinadora leader Oscar Olivera pointed to the urgency of access to water, a resource vital for survival, and to water's sacred cultural significance.[10] Others attributed the birth of Bolivia's new social movements, including indigenous movements in the highlands and tropics, to economic stagnation, aggressive coca eradication, and the decline of state economic revenue from the privatized oil and gas sectors.[11] Indeed, when massive numbers of Cochabambinos flooded into the streets, they found allies across the country because water privatization was a flash point in

broader disputes over foreign influence, neoliberalism, resource governance, and state power. But water warriors' power—and conflicts over water access and ownership—had deeper roots.

This book contends that during the 1999–2000 Cochabamba Water War, Cochabambinos fought to defend something that peasants, urban periphery dwellers, and city-center residents had already won over the course of more than a century of social struggle: democratization and popular control of the region's water sources and infrastructure. Water monopoly, scarcity, and protest were more intense in the Cochabamba Valley than anywhere else in Bolivia, and water tenure transformation there from the 1870s to the 1990s was more dramatic. As Javier Molina and so many other water users who appear in the following pages emphasize, Cochabambinos' water property rights today are based on their historic labor to build and maintain water infrastructure and long-term struggles to gain water access. Estate workers, independent peasants, migrants on the urban periphery, and city-center residents constructed and paid for the region's water sources and systems with little to no assistance from the national government. Their power in the 2000 Water War flowed from their physical control over water sources and infrastructure, and from their knowledge about water systems that they had built, maintained, and defended over generations. Historian Richard White has written that "humans have known nature by digging in the earth, planting seeds, and harvesting plants."[12] In Cochabamba such labor produced knowledge as well as community, property, and revolution. The 2000 Water War was just the latest battle in a century-long war.

ANDEAN WATERSCAPES

The Andes Mountains cut down the western side of the otherwise lush, green South American continent. At the Nudo de Vilcanota, in southern Peru, the mountains split into two ranges. Between them lies the Altiplano, the highland plateau that widens to 129 miles across in Bolivia before the ranges converge again at Llullaillaco on the Chile-Argentina border south of Bolivia.[13] The central Andean region boasts dramatic geographical diversity. Heading east from the Pacific coast, sand dunes quickly give way to the Cordillera Occidental's steep and arid western flank that ascends to the Altiplano. From the Altiplano the Cordillera Oriental descends more moderately through semiarid inter-Andean valleys before yielding to the vast tropical lowlands that roll out to the east.

The great "water tower of South America," as geographers Axel Borsdorf and Christoph Stadel have called the majestic mountain chain, is generous with its surplus.[14] Abundant rainfall at higher elevations collects in mountain glaciers, lakes, and rivers that supply water to mines, fields, taps, and hydroelectric plants in the highlands, valleys, and lowlands below. In the tropical central Andes, gla-

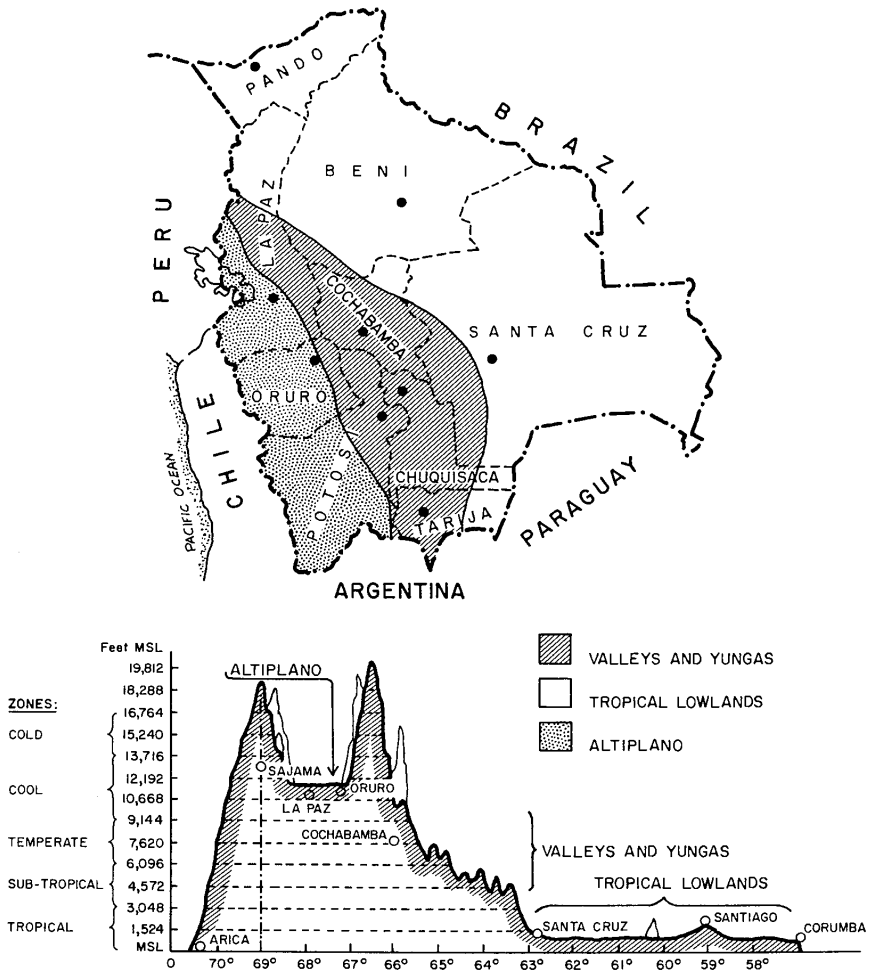

FIGURE 1. Topography of Bolivia. Illustrator unknown. Reproduced with permission from Cambridge University Press through PLSclear.

ciers formed as long ago as the Pleistocene provide meltwater for irrigation and drinking water.[15]

The central Andes have been the site of intense human settlement and movement for centuries as Andean people have taken advantage of different "ecological niches" at different heights. Precolonial Aymara extended kin groups, or ayllus, were centered in altiplano punas, where they grazed llamas and alpacas and cultivated potatoes and other tubers. Ayllus sent groups of settlers, or mitimaes, to sites

dispersed along what came to resemble "vertical archipelagos," as anthropologist John Murra found, establishing "vertical control" over extended areas. Some mitimaes went west to the coast to harvest seafood and collect guano to fertilize their highland fields. Others journeyed east to the valleys and lush tropical slopes to cultivate maize, squash, chili peppers, coca, and cacao and gather palm fruits.[16]

Even before the rise of the Inca empire (ca. 1400–1533), water linked sites scattered along vertical archipelagos, connecting ayllus' dispersed settlements. Since ancient times, Andean peoples have revered water sources such as springs, lakes, and glaciated peaks and treated them as sacred places (*huacas*).[17] Ayllus traced their origins to their lands and the water sources they shared with other communities. Over time, as anthropologist Jeannette Sherbondy has shown, "connections between bodies of water" created "local regions."[18] Because various communities drew on interconnected water sources, allocation and dispute settlement required administration beyond the village level.[19] Increasing coordination around water and the belief that bodies of water were "hierarchically ordered by size and interconnected component parts of a great hydraulic circulatory system," in anthropologist Tamara Bray's words, helped give rise to nested political organization in the Andes.[20] As the Incas built their empire, they appealed to the cosmological unity of water sources to claim a common origin of all Andean peoples and thereby justify their reign.[21] Just as water was central spiritually and politically to the vertical organization of Andean society, community water worship was also deeply connected to labor. As Sherbondy has written, "People made offerings and prayers to [water] sources to ensure their goodwill and supply. . . . Often group labor projects were linked to those rituals."[22] As this book shows, water users have employed collective labor and ritual practices to gain water access and defend it ever since.

Over the six centuries since the Incas established their empire, trade, conquest, imperial labor drafts, and other forced and voluntary migrations have shuffled people across and around the central Andes. Since at least the fifteenth century, the Cochabamba region has been, to use historian Ben Nobbs-Thiessen's phrase, a "landscape of migration."[23] Around the turn of the sixteenth century, the Incas moved some natives out of the region to defend and expand their borders further east and moved highland mitimae settlers into the region to work as agricultural laborers. The Spanish wars of conquest in the 1530s and 1540s pushed many mitimaes back to the Altiplano to seek refuge in their home communities. In the 1570s, Spanish viceroy Toledo resettled the motley mix of indigenous peoples who remained in Cochabamba after these decades of upheaval in Spanish-style towns called *reducciones* or *pueblos reales de indios*.

In the face of onerous labor and tribute requirements in new resettled communities, many community members fled. Runaways found sanctuary in other communities or on haciendas where they took on new burdens as hacienda laborers. In time, many moved from haciendas to Cochabamba's growing urban center or mi-