Oil Sparks in the Amazon

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CHAPTER 1

Tracing Oil- and Gas-Related Conflicts

Conflicts around hydrocarbons are not new in the three countries under study, and they can be traced back to the beginning of oil operations in Colombia at the beginning of the twentieth century. But it was not until the large oil discoveries of the 1970s and 1990s that the dynamics of the oil-related conflicts as we know them today started to develop, particularly in the western Amazon region. It was then that the discovery of large oil reserves turned Ecuador, Colombia, and Peru into oil and gas producers, and the first seeds of oil-related conflicts were planted in the region.

Since then, oil investments have come and gone throughout the years, in tandem with shifts in domestic oil policies and fiscal incentives and the international price of crude. Investor interest has become particularly strong in the past decade, when conventional world oil reserves started to dwindle and high international oil prices turned previously expensive unconventional Amazon oil into a more tangible option. The western Amazon suddenly took a prominent place in the oil and gas map of Latin America, and its share of world hydrocarbons is expected to continue to grow as world demand for oil and gas increases.

This chapter traces the historical development of the oil and gas industries in the three countries and the growing importance of western Amazon in that process. It analyzes Latin America’s increasingly prominent stand in the world oil and gas scenario, evidenced by the current rapid growth of foreign direct investments in those sectors of the economy.

THE WORLD OIL AND GAS CONTEXT

The world map of oil and gas developments has changed dramatically in the past two decades. The Western Hemisphere has been taking a progressively significant role in the discovery of new reserves, and South American countries are among the leading forces behind that trend. Brazil is set to become a world
oil superpower and to challenge Middle Eastern oil producers. Colombia’s oil production has grown so fast during the past decade that the country managed to reverse a long tendency of output drop that threatened to turn it into a crude importer. And Peru became South America’s first exporter of liquefied natural gas in 2010, while Argentina is third in the global ranking of countries with potentially large shale gas reserves, after China and the United States (EIA 2012b).

During the 1980s Mexico and the North Sea produced much of the world oil supplies outside the Middle East. But in the 1990s and the first decade of the twenty-first century, much of those crude supplies came instead from South America, China, and Middle Eastern countries that are not members of the Organization of Petroleum Exporting Countries (IEA 2010, 28). With the end of the era of cheap and easy-to-find conventional oil and turmoil in the Middle East that threatened steady crude flows, companies started to look for new, largely unexplored areas holding nonconventional reservoirs, and South America quickly became a magnet.

The increase in oil prices—from twenty-three U.S. dollars a barrel in 2001 to one hundred in May 2011—played a fundamental role in rapidly turning previously expensive hydrocarbons resources into more available options. Risky, unknown, and largely unexplored areas deep in the Amazon jungle became suddenly more attractive for investors. This tendency was further accelerated by China’s—and to a lesser extent India’s—growing hunger for imported fossil fuels to meet their burgeoning domestic energy demand. In terms of oil production, Latin America is expected to be the second-fastest-growing region (after North America) and will become increasingly well placed to meet the expected growing world demand of coming decades (IEA 2010, 78–93).

Worldwide demand for oil is expected to continue to grow in coming decades. China’s oil demand could almost double by 2035, to 15.3 million barrels per day, from 8.1 million in 2009 (IEA 2010, 102). In 2009 China imported a total of 5.1 million barrels per day of oil, of which 14 percent—or 360,000—came from Latin America (BP 2010, 20). The International Energy Agency (2010, 78–193) predicts that in a hypothetical, and extreme, scenario of no new government policies for meeting energy or climate targets (such as those aimed at reducing greenhouse gas emissions), world demand for oil will shoot up to around 108 million barrels per day by 2035, from 85 million in 2009. Of that projected total demand, as much as 57 percent will come from China.

World demand for natural gas has followed a similar pattern of fast growth over the past two decades, and it will continue that trend for years to come.
Much as with oil, gas demand is expected to increase globally, but particularly in China, where it is projected to skyrocket from around 315 billion in 2009 to 14.1 trillion cubic feet in 2035 (IEA 2010, 180–81). Latin America is projected to provide 17 percent of that total world demand, up from 11 percent in 2008 (IEA 2010, 190–92). Gas will most likely overtake coal in the next two decades as the second fuel in the world energy mix after oil (IEA 2011, 19–22). More than half of that growth will be as liquefied natural gas, as trade in this form of gas will more than double to 17.6 trillion cubic feet by 2035 from 2008 figures. Trinidad and Tobago were the only exporters of liquefied natural gas in the region until 2010, when Peru followed suit from its giant Camisea field, located in the Amazon jungle (*Petroleum Economist* 2011).

**OIL AWAKENING IN THE AMAZON**

Outside of Venezuela, a significant part of Latin America’s still-undeveloped and partly unexplored onshore gas and oil reserves are located in hard-to-reach areas of the Amazon jungle in Peru, Ecuador, and Colombia. There are also reserves in deep-sea waters off the coast. For the past two decades governments and investors have been increasingly focusing their attention in these areas to make up for the scarcity of conventional reserves around the world. High oil prices and increasing world demand suddenly made unconventional Amazon and deep-water areas more cost effective to develop.

Nine countries share the Amazon basin: Brazil, Bolivia, Colombia, Ecuador, Guyana, French Guyana, Peru, Surinam, and Venezuela, but most of it—around 68 percent—is in Brazil. The proportion of the Amazon basin in Peru, Ecuador, and Colombia is relatively small: 13 percent in Peru, 5.5 percent in Colombia, and 1.7 percent in Ecuador. But the basin acquires immense importance in proportion to the national territory of each of the countries: it expands across 75 percent of Peru, 45 percent of Ecuador, and 36 percent of Colombia (Fontaine 2007b). The eastern portion of the Amazon basin is located entirely in Brazil, while the western area extends across Colombia, Ecuador, Peru, and Bolivia.

In general, references to Amazon environmental threats are concerned with the eastern Brazilian portion, which has been traditionally characterized by high deforestation. In 2011 the eastern Brazilian Amazon was the focus of much local opposition to plans for building two hydroelectric projects—the Belo Monte Dam and the Madeira River Complex (Salazar-Lopez 2011). But much attention
has also focused on western Amazon, where there has been a considerable increase in the number of oil and gas licenses in the past decade, particularly in Peru, and to a lesser extent in Ecuador and Colombia. Peru granted eighty-six oil and gas licenses in 2010 (up from just twenty-eight in 2003), of which almost half—thirty-seven—are located in the Amazon. Scholars have documented that almost half of the Peruvian Amazon—48.6 percent—was covered with oil and gas concessions in 2007 (up from 7.1 percent in 2003), and by 2010 active and planned hydrocarbons developments expanded throughout 70 percent of the jungle in that country (Orta-Martinez and Finer 2010).

Initial oil exploration and production in the Amazon goes back to the 1900s and was limited to small quantities of crude produced in Peru. But the real oil boom started in the 1970s and spread throughout western Amazon. Many of the new oil exploration and development blocks there overlap with the territories of largely forgotten and marginalized Indigenous or farming populations and have caused much disruption to their lives and to the local environment. Oil projects that build new access roads also bring colonization to previously
remote forest areas, which results in increased logging, hunting, and deforestation (Finer et al. 2008).

Peru, Ecuador, and Colombia are generally referred to as Andean countries, because they share the Andes mountain range and some of the cultural characteristics linked to that area. But that definition neglects the fact that these three countries also share the Amazon and all the cultural and environmental distinctiveness associated with that region. When oil operations started to expand in the Amazon, local communities with shared cultural and territorial characteristics came together in opposition to them. Later on, we will analyze in detail the nature of the conflicts that emerged from that opposition in the Peruvian and Ecuadorean Amazon. We will also point out parallels and differences with oil conflicts in the non-Amazon producing areas of Colombia, where that country’s largest crude reserves are located. In Colombia, oil operations at present occupy only 10 percent of the jungle, but they are rapidly expanding (Finer et al. 2008).

It is the Amazon that turned Ecuador and Peru into oil and gas producers in the 1970s. It is also in the Amazon that most of the social and environmental negative consequences of the expanding hydrocarbons industry are found. And it is there where the escalating number of hydrocarbons-related conflicts involving Indigenous communities occurs. This is not surprising, given Latin America’s large Indigenous population and the widespread Indigenous inhabitation in the Amazon. Peru has the largest Indigenous population overall, of around 4.4 million (in a total Peruvian population of 27.5 million) (INDEPA 2010; Office of the Ombudsman, 2006). The Peruvian Amazon is home to fifty-one ethnic groups (of a total of sixty around the country) that are organized in thirteen linguistic families and to fourteen or fifteen groups living in voluntary isolation (INDEPA 2010). Of Colombia’s Indigenous population of a little over 1.37 million (3.4 percent of the country’s total population), around 74 percent live in the Amazon: sixty-two Indigenous groups, of a total of eighty-three around the country (RAISG 2009; IWGIA 2010, 136; DANE 2005). In Ecuador almost 7 percent of the total population of some 14 million inhabitants are Indigenous and belong to twenty-nine different nationalities and pueblos (INEC 2001). Most of Ecuador’s Indigenous population lives in the Amazon, including two groups living in voluntary isolation—Tagaeri and Taromenane—within the boundaries of Yasuni National Park, which is also home to the country’s largest still-untapped hydrocarbons reserves. The broad intersection between Indigenous populations and hydrocarbons reserves at a time of high interest in oil and gas investments is at the core of many conflicts.
Oil and gas conflicts go back to the beginnings of oil operations, although the characteristics of the disputes have changed over time. During the first decades of the 1900s, conflicts were largely between the oil companies doing exploration work and governments or land-owning elites that kept much of the profits from the oil operations. The disputes were generally around the sharing of economic benefits from oil. For governments those benefits could take the form of loans or bribes or they could simply be arrangements with foreign oil companies that offered to facilitate access to international financing for local elites or politicians. In exchange, companies were given exceptional investment conditions and access to potential reserves. In Peru the International Petroleum Company was exempt from almost all taxes and had the monopoly on oil supply to the domestic market (Philip 1982, 21–31).

Border conflicts for control of areas rich in hydrocarbons were also common throughout the region. In 1941 Peru and Ecuador went to war over what some historians view as a dispute for the control of oil reserves, although others disagree (Martz 1987, 49–53). Before that there was the bloody Chaco War (1832–1935) between Bolivia and Paraguay for control of the Chaco Boreal.

It was not until the discovery of oil in the Amazon in the 1970s that local conflicts with the population living in the areas of exploration and production started. When oil companies arrived in the Amazon, the presence of the state there was extremely weak, as were policies for the economic or territorial development of the area and for the protection of its social and environmental patrimony. The presence of oil led to the creation of towns around the hydrocarbons activities, which in turn attracted an outside population in search of jobs. In Ecuador, for example, the arrival of Texaco to the Amazon region in the 1960s resulted in the creation of Lago Agrio, the capital of the province of Sucumbios, which later became a base for the company’s operations. Roads were built to access the hydrocarbons-producing areas, facilitating the arrival of colonizers, exacerbating tensions with the local population, and planting the seeds for future resentment.

Historically, the sources of the oil conflicts that exist today may be traced back to the early 1900s in Colombia, in relation to that country’s two initial oil concessions, Barco and De Mares. The opening up of lengthy expanses of territory for construction of two pipelines that would transport oil from the producing areas caused three types of local conflicts from early on: between the oil company and local inhabitants being displaced for construction of the pipelines, be-
tween local inhabitants and the newly arrived colonizers settling in the area and competing for oil jobs, and between oil workers (most of them newcomers) and the Tropical Oil Company, which operated the De Mares concession, for better living conditions. This last dispute had long-lasting historical consequences.

What differentiated this conflict from others was that it involved a new actor: the workers’ union. In 1922 an oil workers’ union was created in Colombia to defend the rights of local inhabitants and oil workers, and after relentless activism and worker pressure it succeeded in obtaining the termination of the De Mares concession in 1951 and its takeover by the state (Avellaneda Cusaria 2004).4 At that point, the state-owned oil company Ecopetrol was created by Law 165, and the country’s oil industry entered a new era that would be characterized by stronger union activism and state control.

Colombia has been a pioneer in the adoption of conflict-mitigation mechanisms applied through practices of citizen participation. The 1991 constitutional reform began the development of the legal tools needed for these participatory procedures. Particularly noteworthy is Law no. 850, passed in 2003, establishing citizen oversight (veedurías ciudadanas in Spanish), whose function is to supervise public and private expenditure and investments. Unfortunately, in several cases where citizen oversight was established for supervising the use of revenues in oil-producing departments, some of the participants were murdered and the participation process lost popularity (Quevedo 2007).

For the past forty years, a large number of oil disputes in Colombia have been connected to the country’s long-term armed conflict. This is what distinguishes them from similar disputes in Peru and Ecuador. Typically, oil conflicts in Colombia may be of two types. One that is unique to that country today is characterized by armed groups taking illegal actions, such as the seizure of oil revenues, attacks against oil infrastructure, or the kidnapping of oil workers. A second type involves mainly Indigenous Peoples, and sometimes peasant communities, who, as in Peru and Ecuador, protest the disruption to their lives brought about by the development of hydrocarbons in their territories.

HOW IT ALL STARTED

The origins and later expansion of oil and gas development in Peru, Ecuador, and Colombia went hand in hand with the creation of the first large oil corporations by the nations that dominated the world political and economic scene at the end of the 1800s. Standard Oil in the United States, Royal Dutch Shell in
Europe, and later on British Petroleum Corporation in the United Kingdom, among others, were the pioneering designers of the global oil industry that was starting to emerge, and Latin America was already part of the oil map of the time (Yergin 1991, 20–164).

Oil exploration in the three countries started in the late 1800s and continued until the beginning of the twentieth century, but at relatively low levels. Commercial oil production in quantities large enough to make real profits on the market did not start until decades later. Initial oil discoveries in Peru and Ecuador were made on the Pacific coast, far from the Amazon reserves that would turn both countries into hydrocarbons exporters. When asked about the history of oil production in their country, Peruvians proudly say that northern Peru was the site of the second oil well in the Western Hemisphere, following oil man Edwin Drake’s drilling of the first one in Titusville, Pennsylvania, in 1859. A few years later, the first geological oil mapping was carried out in Peru’s northwestern coastal tip, with positive results.

Peru’s oil production expanded greatly between the 1890s and the 1930s, mainly from three fields: Negritos, Lobitos, and Zorritos, located in the northwestern Piura region. A smaller field, Pirin, had been discovered in 1875 in the southeastern department of Puno, in the Altiplano, but it soon dried out. During that time, Peru became an oil exporter, with only 10 percent of the production consumed internally. Oil production was mainly in the hands of foreign companies that exported the crude from their own ports, located close to the fields, on the northern coast. The oil operators of the time held production contracts for unlimited periods in exchange for a tax payment (Thorp and Bertram 1978, 95–111). By 1949 one foreign company, the International Petroleum Company, a subsidiary of Standard Oil of New Jersey, controlled 80 percent of Peru’s petroleum output and to a large extent the country’s economy (U.S. Senate 1952, 21–36). The company managed to guarantee its monopoly power over Peru’s oil industry by establishing itself as the facilitator of short-term loans to successive governments, which it could easily obtain given its international reputation and connections: the company arranged for Peru to borrow five million U.S. dollars in 1946 and ten million in 1953 (Philip 1982, 243–57).

As in Peru, Ecuador’s first oil reserves were discovered on the Pacific coast, in the Santa Elena Peninsula, but they were not large enough to be commercially viable. There, Anglo Ecuadorean Oilfields (an affiliate of the British Anglo Persian Oil that later became British Petroleum) started exploration works in 1918 and produced small amounts—around twelve hundred barrels per day—
for export. Exploration in the oil-rich Oriente region started three years later with the arrival of the Leonard Exploration Company from New York (later Standard Oil), which obtained a fifty-year concession, which was soon canceled. Following passage of the Petroleum Law of 1937, Anglo Saxon Petroleum (then owned by Royal Dutch Shell) received an oil concession in the Amazon Oriente to explore a vast area of ten million hectares (Martz 1987, 45–48). Between 1937 and 1942 the company drilled the first wells in an area known as Vil-lano, which years later would acquire international notoriety for a long-lasting conflict with the Sarayaku Indigenous group living there.

Colombia’s first two oil discoveries also coincided with the start of the 1900s. One was in the northeast region of Catacumbos, located in the department of Norte de Santander, close to the Venezuelan border. There, the Barco concession development began in 1913, first by Gulf Oil and then by Texas Mobil. The second oil development was in the Middle Magdalena River valley, under the De Mares concession, which was in the hands of Tropical Oil Company (colloquially known as Troco).

Initially, foreign oil companies that operated in Ecuador and Peru signed concession contracts that allowed them to develop and commercialize crude in a specific area for an agreed-on period in exchange for a royalty payment. Those rules changed in the 1950s, when the state assumed a more prominent role in the oil industry in both countries. At that point, concession contracts were replaced with participation and association agreements with state-owned oil companies. In Colombia the transfer of the De Mares concession to Ecopetrol in 1951 was part of that regional trend.

By 1969 Colombia had nationalized its oil resources with passage of Law 20, which introduced association contracts between the state and foreign companies. Under these contracts state-owned Ecopetrol received not only royalties but also part of the production, for being a partner in a consortium with private companies. A legal modification introduced in 1994 increased the state’s share of production revenues even more, from 50 percent to as much as 75 percent, once investments and costs were recovered, or when production exceeded sixty million barrels. By comparison, Ecuador’s state share of oil revenues in the 1900s was 62 percent, through state-owned oil company Petroecuador. In Peru the expropriation of the International Petroleum Company’s assets in 1968 marked a turning point toward full-fledged nationalization. At that time, anti-U.S. sentiment was growing in Lima, and the company received no compensa-tion, which led to serious political frictions between the two countries.
Like no other commodity, oil awakens strong nationalistic sentiments. This was true in the early days of production and continues to be so through the twentieth and twenty-first centuries. Originally, the debate around hydrocarbons developments was heavily polarized between those who rejected the presence of foreign multinationals and those who thought they were essential, because governments lacked the know-how and the capital necessary to develop the national oil industry. These opposed points of view resulted in constant policy shifts throughout the history of each country’s oil development from pro-state to investor-friendly approaches, depending on which side held power at a given time. This political back and forth is one of the factors that continues to shape oil policies even today.

BLACK GOLD BECOMES A REALITY

The discovery of large, commercially valuable oil and gas reserves between the 1970s and the 1990s modified the dynamics of the three countries forever. Ecuador and Peru became major oil and gas producers, thanks to the discovery of the Amazon fields, and Colombia turned into one of Latin America’s main oil producers following the discovery of three major fields in the eastern region of the country.

Ecuador

Amazon oil from Lago Agrio (also known as Nueva Loja), in the province of Sucumbios, turned a page in Ecuador’s history. By 1972 Ecuador became a crude exporter, and oil became key for Quito’s political, economic, and social dynamics for years to come. State-owned oil company Corporación Estatal de Petróleos de Ecuador (CEPE) was created in 1972, and Ecuador joined OPEC the following year.

The oil boom of the 1970s hit Ecuador so suddenly that there was not enough time to build much oil expertise, and decisions on contracts, oil policies, and legislation needed to be adopted quickly (Martz 1987, 43–63). It was widely accepted that the new oil wealth would bring about important improvements in the country’s political, economic, and social life, and the government wanted to be in control of that process. So by 1976 CEPE became the de facto main shareholder of the Texaco concession in Lago Agrio. Texas-Gulf was forced to hand over more than 60 percent of its share to the government and was allowed to
keep the rest until 1992, when Petroecuador (successor of CEPE) took full control (Philip 1982, 274–80).

The Law of Hydrocarbons was reformed in 1993 by Law 44 (R. O. 326, 29-XI-1993) to increase the role of Petroecuador in upstream operations while at the same time going in the opposite direction in downstream operations (refining, transportation, and commercialization), where foreign investments were welcomed. This move reversed twenty years of state domination in downstream operations and had a very specific goal: to amass the necessary funds to double oil transportation capacity, which had become a bottleneck to increased production. The hope was that by updating and doubling transportation capacity, Ecuador would be able to also double its oil production.

Crude was until then transported from the Amazon fields through the 310-mile-long Sistema de Oleoducto TransEcuatoriano network, which had a transport capacity ceiling of 390,000 barrels per day and was controlled by Petroecuador. In response to calls for expanding oil transport infrastructure, a second, almost parallel oil pipeline came onstream in 2003. The 450,000 barrels per day capacity of Oleoducto de Crudos Pesados (OCP) was managed by private companies and stretched across the country, from the Amazon fields in the east to the Pacific Ocean in the west.

By some accounts, the 300-mile-long OCP was built in preparation for the future development of the fields in Ishpingo, Tambococha, and Tiputini (ITT), in Yasuni National Park, which had caught the eye of oil investors early on. The ITT fields hold Ecuador’s most promising undeveloped crude reserves, estimated at one billion barrels, or the equivalent of almost 15 percent of the country’s total reserves (Andrade Echeverría 2010, 104–5). But development of the full capacity of the ITT fields has been delayed due to much opposition, given its potential negative social and environmental effects. Home to various Indigenous groups, Yasuni National Park is one of the most unique biodiversity regions of the western Amazon.

The truth is that transportation through the OCP has always remained below capacity because private investors have been reluctant to make new commitments to boost Ecuador’s output. Political instability, unclear and constantly changing rules of the game, and barriers to the development of the ITT fields created an atmosphere that was not conducive to renewed private interest. State-owned oil production was not any better. Petroecuador’s weak financial situation prevented the company from either maintaining output constant in mature fields or expanding exploration to new areas. Service contractors ac-
cused Petroecuador of being in arrears in its payments and stopped providing services to the state company, while oil workers went on frequent strikes, all of which contributed to a decline in state oil production: Petroecuador went from producing roughly 110,000 barrels per day in 1995 to 70,000 in 2005 (Banco Central 2005, 47–48). Ecuador’s dream of doubling output following construction of the OCP was further away than ever.

The lack of investor interest continued through the first decade of the twenty-first century, mainly driven by somewhat erratic oil policies, characterized by increased state control at a time when Peru and Colombia were going out of the way to attract hydrocarbons investments. With the arrival of President Rafael Correa in Ecuador in 2007, and his reelection in 2009, the investment atmosphere deteriorated even further. Companies were asked to renegotiate their contracts with the government and, after three years of seemingly unending negotiations, were forced to accept less profitable terms. In addition, a new hydrocarbons law, the Law to Reform the Hydrocarbons Law and the Tax Regime Law (R. O. 244), passed in 2010 increased the role of Petroecuador in crude developments.

Four companies—Brazilian Petrobras, China National Petroleum Company, South Korea’s Canada Grande, and U.S.-based Energy Development Corporation—left the country over disagreements with the new terms the government wanted to impose on them, and Petroecuador took over their oil blocks (El Comercio.com 2010). A new state-owned oil company, Petroamazonas, was created to operate the fields taken away from the private operators.

The departure of the private oil companies came soon after the shock caused by the takeover of Block 15 from its operator, U.S. oil company Occidental. The government of Ecuador accused Oxy of breaking its contractual obligations by handing over a stake in that project to another firm without first consulting the authorities. Oxy took the case to arbitration at the World Bank’s International Center for Settlement of Investment Disputes, an international tribunal frequently used by foreign oil companies to resolve disagreements with their host countries. Block 15 was very important for Ecuador because it was the country’s largest privately operated field and was producing a significant one hundred thousand barrels per day when Petroecuador took it over in 2006. Around the same time, Petroecuador also seized the fields of another company, Perenco from France, due to tax disputes. A more restricted investor atmosphere resulted in large investment cutbacks, which in turn led to a striking 9 percent drop in total crude output between 2006 and 2009. From then on, investments
by companies that remained in Ecuador dropped by 23.8 percent, as they adopted a cautious approach, given the drastic changes in the country’s investment scenario (Banco Central 2011; see graph 1).

The takeover of private output increased Petroecuador’s oil portfolio, but the company failed to keep up with the newly acquired private production. Output from Block 15 alone dropped to 92,100 barrels per day only a year after its takeover, mainly due to inefficient management. Of the US$220.7 million budget Petroecuador had assigned to the field during 2006, only US$86.7 million, or less than 40 percent, was invested (Banco Central 2006). Two years later, two new discoveries—in the Drago field and the old Shushufindi field located in the Amazonian province of Sucumbios—changed the tide (Gill 2011). Output by Petroecuador and its subsidiary, Petroamazonas, recovered only slightly: from 466,000 barrels per day in January 2010 to 504,000 a year later. But reserves were positively impacted by the new finds and increased considerably in 2008 and 2009 to 6.5 billion barrels, from 4 billion registered in 2007 (Banco Central 2011).

Holding the third largest oil reserves in the region after Venezuela and Brazil, Ecuador is the fifth South American producer after Brazil, Venezuela, Argentina, and Colombia. Petroecuador has long been known for being notoriously dysfunctional, and corruption scandals within the company have been the standard rather than the exception throughout the history of the company. This trend probably signals overall mismanagement of the country’s oil indus-
try, which is the number one source of government revenues and accounts for 15 percent of the country’s gross domestic product and 50 percent of its exports.

In the midst of various company scandals, President Correa was planning major reforms of Petroecuador and Petroamazonas at the time this book was being written (Ministry of Nonrenewable Resources 2011b). In September 2010 around 10 percent of Petroecuador’s workforce was suspended under the suspicion that they were shareholders of another company that had been awarded fuel commercialization contracts and was planning to invest the proceeds in tourism projects. Ecuadorian law forbids state companies from entering into agreements that benefit their employees directly.

Under the Correa administration, much of Ecuador’s new infrastructure investment was being financed with loans from China in exchange for future payment in barrels of Ecuadorian oil (Alvaro 2009). According to officials representing Chinese interests in the United States, China prefers these types of money-for-barrel arrangements to access Ecuadorian oil rather than entering into more formal contractual long-term exploration and development agreements. Chinese mistrust of the nontransparent and largely corrupt manner in which Ecuador has historically been known to manage its oil industry seems to be behind China’s reasoning.

In 2010 two Chinese companies operating in Ecuador—Andes Petroleum and Petrooriental—made public their concerns about the lack of transparency during new contract negotiations and alleged that the government had tried to pressure them into accepting new, less advantageous contractual terms. Both Chinese companies threatened to seek international arbitration (Reuters 2010). To avoid this kind of retaliation by companies in the future, under the terms of the 2010 reforms to the hydrocarbons law, the government of Ecuador formally exited the International Center for Settlement of Investment Disputes.

Colombia

Colombia has the most successful oil industry of the three countries under study in this book. Oil in commercially viable quantities came to light in the 1980s and 1990s, with the discovery of three oil fields in the eastern region of the country. Caño Limón was discovered in the department of Arauca in 1984, and Cusiana and Cupiagua, located in the adjacent Casanare department, were discovered in 1986 and 1993, respectively. These oil finds turned the country into a significant oil producer and changed the demographic configuration of
producing areas, as numerous peasants started to arrive in search of employment opportunities in the oil industry and mingled with Indigenous groups already living in the region. The new oil discoveries also attracted private investor interest in Colombia, in spite of relatively unfavorable contractual terms at the time. Colombia had become an oil exporter in 1969, and since then hydrocarbon laws had fluctuated from supporting private investments to moments of strong state control.  

The new discoveries of the 1980s and 1990s boosted oil production, but by the start of the year 2000 output started to decline at alarming rates. By 2004 oil production had fallen to 551,000 barrels per day from a peak of 800,000 in 1999, and there were fears that unless the falling trend was reversed, Colombia would soon cease to be one of South America’s main crude producers and become an oil importer. Oil reserves also fell dramatically to 1.5 million barrels in 2004, from 2.3 million in 1999.

There were various reasons for the drastic drop in oil production. First, fields naturally declined, and there had not been major new reserves discoveries for some time. Second, frequent guerrilla attacks against oil infrastructure and the kidnapping of oil workers contributed to investors’ losing interest in Colombia. Third, Colombia’s challenging geology for the development of oil reservoirs has historically made that country’s oil reserves more costly and riskier to develop than some of its regional neighbors, particularly oil-rich Venezuela.

The government was set on changing the tide by attracting private investments that would help reverse the worrisome decline of oil production and reserves. Faced with the prospect of Colombia becoming an oil importer, the government of President Alvaro Uribe (2002–10) launched investor-friendly changes to the regulatory framework and took measures to improve the security of oil infrastructure. The new regulations included royalties as low as 5 percent and the possibility for private investors to keep 100 percent of production in some cases. Also, the privatization of 20 percent of state-owned Ecopetrol was set in motion, and the Agencia Nacional de Hidrocarburos was created to oversee the development of the oil sector.

The agency organized seven oil bidding rounds between 2007 and 2010, offering previously undeveloped regions in an effort to expand the hydrocarbons map. It succeeded in attracting new players to new areas located along the Pacific coast (onshore and offshore), in the southwestern Amazonian Putumayo department, and in the northern Caribbean, expanding the country’s submarine platform. Under the new investment terms introduced in 2003, the
most common oil contracts became associations between Ecopetrol and private investors, in which the state share could fluctuate between 30 percent and 60 percent.

By 2009 investment in the oil sector had risen to roughly US$2.5 billion, compared with negative figures in 1999 and 2000, and production had rebounded slightly to 685,000 barrels per day (Asociación 2013). Key to the attraction of new investment to the hydrocarbons sector was the introduction in 2005 of the Law of Judicial Stability for Investors in Colombia (no. 963), to guarantee that the terms and conditions of the investment would not be amended throughout the life of the project. By 2011 oil production had greatly recovered and at 916,000 barrels per day had surpassed peak 1999 levels. Oil reserves also went up to an estimated 2.3 million barrels (see graph 2). For Colombia, what mattered most was that new investment helped to stop a dangerous downward spiral of oil reserves and production that would have otherwise doomed the country’s oil industry for decades to come.

According to the government, the oil industry restructuring greatly improved the rate of success of oil exploration, which went from just 21 percent of all wells drilled in 2003 to 67 percent in 2009 (Vera Díaz 2010). The bulk of Colombia’s traditional oil production is mainly concentrated in areas spread out throughout three departments to the northeast—the old producing areas of Casanare and Arauca and a new production site in Meta—while natural gas

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**Graph 2**

Colombia: Oil production

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<th>Year</th>
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<td>2005</td>
<td>561</td>
</tr>
<tr>
<td>2006</td>
<td>616</td>
</tr>
<tr>
<td>2007</td>
<td>685</td>
</tr>
<tr>
<td>2008</td>
<td>786</td>
</tr>
<tr>
<td>2009</td>
<td>916</td>
</tr>
</tbody>
</table>

*Source: Compiled by the author with data from BP (2011) and the Ministry of Mines and Energy of Colombia (1999–2011).*
is mainly produced in the northern La Guajira department and to a lesser extent in Casanare. As investments started to make their way back to the country in the past decade, traditional oil regions expanded and new departments were added to the oil map. Colombia consumes around 280,000 barrels per day and exports the rest, mainly to the United States.

Peru

The case of Peru is somewhat different from the other two, because despite the fact that it is a major natural gas producer, it has still not discovered large oil reserves and is not yet self-sufficient in supplies of crude. Peru imports oil to meet its domestic needs, which results in significant trade deficits. In the 1990s Peru decided to reverse this situation, doing everything possible to rapidly develop its oil industry. A new law passed in 1993, the Law to Regulate Hydrocarbons Activities in the National Territory (no. 26221), provided the appropriate legal framework for attracting foreign companies through competitive contracts.

State-owned oil company Petroperu, created in 1969 by Decree 17753, kept control of a small portion of downstream operations, a few upstream assets, refining operations, gasoline stations, and the Transandean pipeline from the International Petroleum Corporation. But the bulk of the upstream industry was privatized, marking the beginning of a new era for the country’s hydrocarbons industry, with the private sector taking a leading role in the industry (Mayorga Alba 2006, 387–407). A new government agency, Perupetro, created in 1993 by article 6 of Law 26221, promoted hydrocarbons investments and oversaw contract implementation.

This regulatory restructuring of the oil industry immediately caught the attention of foreign companies, and oil investments rose significantly, from US$19.89 million in 1993 to US$187 million in 1997, particularly in the tropical forests of the northern regions. The operational outcome of these efforts was not impressive, however, because no major oil reservoirs were found, and private interest consequently dropped. Investments in oil subsequently fell to less than US$13 million in 2000 (Ministry of Energy 1999, 2008), and as a result by 2003 oil production was at 92,000 barrels per day, down from 116,000 in 1998 (BP 2009). Oil reserves also greatly suffered from the lack of private investor interest and drastically dropped from 800 million barrels at the beginning of the 1990s to an average of 300 million barrels toward the end of that decade and the beginning of the next.
With little new oil to be found, and an expanding economy, Peru was forced to import crude to meet its domestic demands just when oil prices started to go up. To counter this situation, starting in 2004 the government launched a second aggressive oil exploration plan that included the development of marginal oil deposits and new fields throughout the country, including much of the Amazon region. By that time, the giant Camisea natural gas reserves that had been discovered in the Amazon in 1989 had started to produce and would soon turn Peru into South America’s leading natural gas producer. Output from Camisea increased extraordinarily, from 36 million cubic feet per day in 2001 to more than one billion in 2011. In 2010 Peru became South America’s first liquefied natural gas exporter (see graph 3).

With Camisea, Peru acquired for the first time a prominent place among the region’s large energy producers and its main exporters. The giant gas reserves, which were managed by a private consortium, also helped to attract investor interest in the Andean country’s overall energy potential. The investor-friendly policies introduced in 2004 led to a sharp recovery in oil investment, which went from US$160 million in 1999 to US$1.5 billion in 2008. Especially attractive to investors were royalty rates as low as 5 percent and the introduction in 2007 of a new system of competitive bidding. The restructuring abandoned the one-on-one negotiations between Perupetro and selected oil operators, which

Graph 3   Peru: Natural gas production

<table>
<thead>
<tr>
<th>Years</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Million cubic feet/day</td>
<td>36</td>
<td>43</td>
<td>51</td>
<td>83</td>
<td>149</td>
<td>174</td>
<td>263</td>
<td>334</td>
<td>343</td>
<td>700</td>
<td>1099</td>
</tr>
</tbody>
</table>

Source: Compiled by the author with data from Perupetro (2011).
had become largely unpopular among companies. By 2009 Peru hit a historical record with the signing of eighty-nine oil contracts (nineteen in the development phase and seventy exploration agreements), compared with a mere fourteen in 2004 (Ministry of Energy 2009). Investments in the oil industry are projected to reach US$9 billion in the period between 2010 and 2014 (Ministry of Economy 2013).

Despite the new oil exploration activity, Peru remains a minor crude producer compared with Colombia and Ecuador and still does not produce enough to meet domestic consumption, especially following the economic boom of the first decade of the twenty-first century. In 2008 and 2009 Peru produced 120,000 and 145,000 barrels per day, respectively, but consumption was higher, at 172,000 in 2008 and 188,000 in 2009 (BP 2009). Even in 2009, when domestic demand dropped as a consequence of the global economic recession, consumption was still higher than production of oil.

The expectation is that a free trade agreement Peru signed with China in 2009, plus exports of liquefied natural gas that started in 2010, will eventually produce a steady income to help offset increasing oil imports and stabilize the hydrocarbons trade balance. Peru’s refining network has not yet been upgraded to process the country’s mainly heavy crude blends, so imports of lighter oil are needed to mix the two and run them through domestic refineries. This situation would be reversed with the planned expansion and upgrading of the 62,000-barrels-per-day Talara refinery, which would allow for the processing of the domestically produced heavy crude without needing to import expensive lighter blends.

Peruvians were eagerly anticipating the planned start-up of production in 2013 of Block 67, located in the northern Amazon department of Loreto and thought to be the largest in Peru. The almost three hundred million barrels of heavy crude the Amazon block is estimated to hold are viewed as a potential solution to the country’s oil deficit. However, opposition by the Indigenous population has been very strong and the future of Block 67, and adjacent Block 39, remains unclear.

**OIL INVESTMENTS IN 2000 AND BEYOND**

The region as a whole, with the exception of Ecuador and Venezuela, which adopted state-oriented policies, saw a boom in foreign direct investment (FDI)
flows during the first decade of the twenty-first century. In 2010 FDI to Latin America surged by 56 percent over 2009 figures, and natural resources, including the oil and gas industries, were the sector of preference for investors. That year, general FDI to South America exceeded the annual average for the decade, reflecting the region’s expanding role as an investment destination for transnational companies, oil corporations among them. Natural resources attracted 43 percent of the total FDI in 2010, followed by the service sector (United Nations 2010). As shown in graph 4, of the two main FDI recipient sectors, only natural resources saw an increase in 2010 from previous years.

The ups and downs of the oil industry in Latin America have been historically linked to the flow of private investment. Often, there is a direct link between the pace of increase or fall in production and reserves and the flow of FDI. With few exceptions, governments lack the human, technological, and financial capacity needed to sustain a dynamic oil and gas industry, and they need to resort to private investors.

As described earlier, during the first decade of the twenty-first century, private oil investments moved in opposite directions in Peru and Ecuador: while Lima saw an influx of oil investors, Quito experienced steep drops. The main reason for this trend was Peru’s investor-friendly policies versus Ecuador’s support of an increasing role of the state in its natural resource sector, particularly in oil and gas developments. Credible statistics for the hydrocarbons sec-

![Graph 4: Foreign direct investment flows to South America](image-url)

Source: Compiled by the author with data from ECLAC (2010a).
tor are elusive for Ecuador, but FDI flows for the whole natural resource sector are quite eloquent when compared with those of Peru. In 2009 Peru received US$443 million in FDI in natural resources, a notable increase from only US$65 million in 2001. By contrast, during the same period Ecuador experienced a huge decline of FDI in natural resources, from US$1.14 billion in 2001 to US$45 million in 2009 (CEPAL 2009). By comparison, in 2009 Colombia received US$5.8 billion in FDI for developing its natural resources, a significant increase from almost US$1.1 billion in 2001, mainly due to the country’s decision to develop that sector with private investment.

In Peru, the creation of a state agency—Perupetro—in 1993 specifically for promoting oil investment in the hydrocarbons sector was the key to sustaining the success that followed. Private investment has been the main engine behind Peru’s economic growth of the past two decades, and hydrocarbons have been the second most attractive investment sector after mining. To attract oil companies Peru introduced low royalty rates and flexible operating terms and throughout the 1990s started to incorporate a body of laws that guaranteed stable legal terms for investors. The state adopted a smaller role in oil and gas exploration to allow for increased private participation, and by June 2010 it was considering lowering its stake in the state-owned oil company Petroperu by 20 percent. In 2005 the Peruvian Congress granted Petroperu complete autonomy to undertake exploration and development activities and to participate in the whole chain of the hydrocarbons process, in competition with other players.

By contrast, in Ecuador, following the 2010 reforms to the hydrocarbons law, private companies lost the right to keep a share of oil finds. They were required instead to hand over their oil production to the state. In exchange, they would receive a flat fee, which varied from contract to contract, for each barrel of produced oil. The departure of four major oil operators culminated in a string of events leading to a more assertive role for the state in the control of the oil industry during the first decade of the twenty-first century.

With a total of 250.2 million barrels of proven oil reserves, Latin America holds the second-largest global oil pool. That in itself would appear to be enough to attract investor interest to meet future global demand increase. However, most of the total reserve base is concentrated in Venezuela, which for the past two decades has been hostile to private investments. In 2011 Venezuela held 211.2 million barrels of oil reserves and 195.2 trillion cubic feet of natural gas: 15.3 percent of the world total oil reserves and 2.7 percent of its natural gas
endowment (BP 2011). No wonder Venezuela has been the mecca for oil companies in South America, at least until the mid-1990s, when investment regulations were softer.

Had it not been that Venezuela’s tightening of its investment rules at a time of high international oil prices made it feasible to develop economically risky Amazon areas, Peru and Colombia might have not experienced large investment flows. This is simply because Venezuela’s large base of conventional and nonconventional oil and gas reserves and its low geological risk factors make that country a favorite among oil investors. The hydrocarbons reserve base in the three countries studied in this book is minimal. Table 3 shows the world share of crude and gas reserves among the main producing Latin American countries. Ecuador, Colombia, and Peru are highlighted.

In terms of production, in 2011 Latin America as a region contributed roughly 7.4 million barrels per day, or just 9.5 percent, of global oil output (BP 2011). Venezuela and Brazil together produced most of that, or almost 5 million barrels per day of oil. The other countries contributed minimal amounts to world output. Graph 5 shows Venezuela’s role as South America’s number

<table>
<thead>
<tr>
<th>Country</th>
<th>Oil reserves (millions of barrels)</th>
<th>Share of world total (%)</th>
<th>Gas reserves (trillions of cubic feet)</th>
<th>Share of world total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Venezuela</td>
<td>211.2</td>
<td>15.3</td>
<td>195.2</td>
<td>2.7</td>
</tr>
<tr>
<td>Brazil</td>
<td>15.1</td>
<td>0.9</td>
<td>16.0</td>
<td>0.2</td>
</tr>
<tr>
<td>Mexico</td>
<td>11.4</td>
<td>0.7</td>
<td>12.5</td>
<td>0.2</td>
</tr>
<tr>
<td>Ecuador</td>
<td>6.2</td>
<td>0.4</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Argentina</td>
<td>2.5</td>
<td>0.2</td>
<td>12.0</td>
<td>0.2</td>
</tr>
<tr>
<td>Colombia</td>
<td>2.0</td>
<td>0.1</td>
<td>5.8</td>
<td>0.1</td>
</tr>
<tr>
<td>Peru</td>
<td>1.2</td>
<td>0.1</td>
<td>12.5</td>
<td>0.2</td>
</tr>
<tr>
<td>Bolivia</td>
<td>n/a</td>
<td>n/a</td>
<td>9.9</td>
<td>0.1</td>
</tr>
<tr>
<td>Trinidad and Tobago</td>
<td>0.8</td>
<td>0.1</td>
<td>14.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Total</td>
<td>250.2</td>
<td>17.8</td>
<td>278.1</td>
<td>3.9</td>
</tr>
</tbody>
</table>

*Source:* Compiled by the author with data from BP (2011).
one oil producer, followed by Brazil, with Colombia as a distant third. Peru is a minor oil producer for the moment.

The oil scenario for the region will likely change dramatically once the bulk of Brazil’s newly found hydrocarbons reserves, located in deep waters off the country’s southern coast, are deemed commercial. Brazil plans to produce in excess of 4 million barrels per day by 2020, which would more than double the amount it produced in 2011. By then, Brazil will comfortably become Latin America’s number one producer of oil, surpassing Mexico and Venezuela, which produced 3 million barrels per day and 2.72 million, respectively, in 2011 (EIA 2012b).

In December 2010 Brazil’s state-controlled oil company Petrobras submitted a declaration of commerciality for two presalt fields, the Lula and Cernambi (formerly Tupi and Iracema), with an estimate of total recoverable reserves between the two of 8.3 billion barrels of oil equivalent (the combined values of crude oil and natural gas extraction). By some accounts, total deep-water crude reserves in all of the fields are estimated between 10 and 16 billion barrels of recoverable oil. Added to Brazil’s proven crude reserves of 12.9 billion barrels, the deep and ultradeep finds would place the country second after Venezuela among largest Latin American hydrocarbons holders (IEA 2010, 114).
The development of Brazil’s presalt reserves will also change the natural gas landscape for the region. In 2011 Mexico in North America and Trinidad and Tobago in the Caribbean continued to be the main producers, at 5.1 trillion and 3.9 billion cubic feet per day, respectively (BP 2011). Colombia’s natural gas production has been increasing steadily since 2001: from 600 million to 1.1 billion cubic feet per day in 2010, when it was still producing more than Peru. But Peru caught up in 2011 with a matching of 1.1 billion cubic feet per day output, reflecting the country’s impressive performance since the startup of production in 2003 from its massive Camisea gas reserves. Ecuador’s natural gas production is marginal, and for that reason it is not included in this analysis. Graph 6 shows Latin America’s main natural gas-producing countries.

Latin America is expected to contribute a significant share of world oil supply to meet demands projected for the near future. For that to happen, the region will need major investments to modernize its decaying infrastructure. International Energy Agency (2010, 94) calculations estimate that a cumulative global investment of US$8.1 billion will be needed in energy supply infrastruc-
ture between 2010 and 2035 to meet world oil and gas supply projections. Most of the oil supply infrastructure investments will be in non-OECD countries, with Latin America taking the first place among them.

SUMMARY

Investor interest in oil and gas in South America has grown tremendously in the past two decades, and the region is starting to be seen as a potential major source of global oil supplies for the near future. High international oil prices and sound investment policies in some countries have contributed to the region’s hydrocarbons boom. In coming decades South America will continue to be among the regions of choice for oil investors, due to strong global demand and high oil prices, which are both projected to remain robust. This is in spite of the fact that the region holds only 15 percent of total world oil reserves, compared with 57 percent in the Middle East. Political turmoil and uncertainty in the Middle East has resulted in dwindling investor interest that will likely contribute to a refocusing on other regions with potential, such as Latin America.

One of the new areas of interest is the western Amazon, where oil and gas reserves have until recently remained largely untapped, due to inaccessibility and environmental and social risks. High international oil prices and increasingly scant conventional oil pools around the world suddenly put this previously forgotten and remote part of the globe on the radar screen of oil companies. While an attractive oil investment area under current market conditions, the western Amazon retains the social and environmental characteristics that had kept investor interest at arm’s length for many years: the presence and opposition of historically marginalized vulnerable groups, mainly Indigenous populations, and a unique biological diversity, both of which pose an enormous risk for oil development. The clash between the development impulse and the conservationist forces is at the heart of the unparalleled proliferation of oil-related conflicts that have emerged in the region. Unless rapidly and effectively resolved, these conflicts threaten the long-term sustainability of economic growth in Latin America.