A Perfect Storm in the Amazon Wilderness

Success and Failure in the Fight to Save an Ecosystem of Critical Importance to the Planet

Chapter 6

Culture and Demographics
Define the Present

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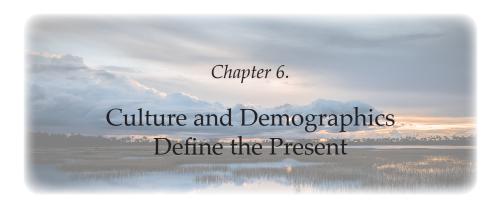
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Infrastructure investments, agricultural production systems, land speculation and the exploitation of mineral resources have all been identified as drivers of deforestation and hydrological degradation in the Pan Amazon. These forces do not act in isolation, but are the consequence of people who act within cultural spaces defined by history and circumstance. Farmers, ranchers, miners, urban elites and the blue-collar workforce are all people pursuing their individual economic interests. Politicians respond to citizens' demands for economic growth, job creation and an improved standard of living, while businesspeople seek to make a profit and increase their shareholders' net worth. By necessity or design, people make decisions with extremely short horizons and are usually forced to choose among a limited number of options determined by public policies and market exigencies.

The current state of the Pan Amazon is product of a complex dynamic that has evolved over centuries. Paramount is the resiliency of its Indigenous cultures, which have withstood the onslaught of colonial and republican exploitation, particularly the events of a rubber boom (1879–1912) and the nationalist development policies of the last half of the twentieth century when governments adopted policies specifically designed to populate and transform their Amazonian provinces. Migration has radically transformed the Amazon, creating a population that is highly dependent on the conventional economy and global commodity markets. Although the development policies that transformed the region after 1970 were largely focused on rural production strategies, internal migration has led to a concentration of people – and talent – in the region's rapidly growing urban centres.

Economic and development policies originate in capital cities governed by political and financial elites responding to demographic and macroeconomic phenomena that are mostly beyond their control. Domestic politics is more often reactive than strategic, and when it does have a strategic focus, it is usually based on conventional ways of thinking or

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Text Box 6.1: The Development Phases of the Recent Historical Past

Geopolitical anxiety conceived over centuries gave rise to policies to physically occupy the Amazon after the Second World War. The Nationalist phase was initiated by elected governments (1945–1965) and was enthusiastically embraced by military rulers who launched investments in transportation infrastructure while promoting migration and colonisation (1965–1985). This period was succeeded by a Neoliberal phase, as nascent democracies created the foundations of a more representative society while embracing market-based economic reforms (1985–2005).

Deforestation rates exploded as landholders converted forest resources into financial capital by implementing business models based on conventional agriculture, while civil society campaigned for conservation initiatives and sustainable development. Governments responded by creating the world's largest network of protected areas and Indigenous territories (see Chapter 12).

The nations of the Pan Amazon transitioned into a Neosocialist* phase (2005–2015), which coincided with a global commodity boom that spurred renewed investment in infrastructure and the expansion of industrial agriculture. Sustainable development was now official policy across the region, but societies continued to pursue conventional business strategies. Most recently (post-2015), stagnant economic growth and dissatisfaction with endemic corruption have led to a populist backlash that has threatened to undermine democratic institutions and progress towards implementing sustainable development.

* Commonly referred to as Socialismo del Siglo XXI; adherents included Brazil, Bolivia, Ecuador and Venezuela; Colombia and Peru doubled down on market-based economic models, while Guyana and Suriname pursued idiosyncratic policies unique to their status as newly independent nations.

heavily influenced by vested interests. International institutions influence these policies through development assistance and investment finance, as well as advice provided by legions of development experts. Sometimes this expertise is astute, but too often it is flavoured by cultural bias and economic perspectives derived from an ever-changing interpretation of historical events and economic theory.

Over the past half century, governing philosophies have swung across the political spectrum, ranging from authoritarian regimes espousing economic nationalism to liberal democracies seeking to integrate national economies into global markets (see Text Box 6.1). Latin America seems always to be on the verge of a development breakout — but it never actually materialises. The failure to capitalise on the inherent advantages of the region's natural and human capital has been ascribed to economic mismanagement, endemic corruption, entrenched inequality, legal insecurity and market cycles that undermine periodic attempts at reform.

The original economic strategy of European colonial powers was based on the exploitation of the Amazon's natural resources. This extractive model was inherited by nation states that complemented it with an emphasis on national sovereignty. The importance of sovereignty was accentuated during the first rubber boom, when competition altered international boundaries and reinforced distrust of foreign powers. The fear of foreign dominance is a legacy of a shared colonial past and dubious investment schemes concocted by international holding companies preying on the needs of sovereign states.*

Mistrust may have been reinforced by the US military during the Second World War, when it installed an independent logistical system to ensure the supply of rubber. It was most certainly strengthened during the Cold War, when the United States meddled in the internal affairs of Latin American countries. It would eventually manifest itself in Brazil as a paranoid conspiracy theory that the Amazon would be declared an international park under the guidance of the United Nations. The fear of neocolonialism extends to multinational corporations, which are viewed with suspicion, and is reflected in an international treaty that effectively prohibits research by pharmaceutical companies targeting the biodiversity of the Amazon.

Each nation has a unique story. Brazil and Bolivia have aggressively expanded their agricultural frontiers, motivated by cultures that lionise pioneers and policies that support private initiative. Colombia and Peru have experienced civil unrest and extreme violence that inhibited their ability to develop their Amazonian hinterlands. Peace, even if imperfect, increased migration and settlement. Venezuela has over-invested in oil production, which inadvertently suppressed development options that might have brought change to the Amazon. The opposite occurred in Ecuador, where investment in oil stimulated both migration and agricultural development. Suriname and Guyana have essentially ignored their forest interior, choosing instead to focus on the exploitation of their mineral resources. French Guiana is an appendage of its colonial master and has little motivation to develop its forest resources.

^{*} The most notorious of these was the Aramayo Contract, which essentially ceded control of Acre to The Bolivian Corporation for 25 years as a (failed) strategy to prevent the incursion of Brazilian *seringueiros*.

[†] Comments from US politicians fostered this attitude; for example: 'Contrary to what Brazilians think, the Amazon is not their property, it belongs to all of us' (Senator Al Gore, 1989). (http://www.nytimes.com/2008/05/18/weekinre-view/18barrionuevo.html)

[‡] Individual countries promulgated rules restricting collecting activities by foreign and domestic scientists in the 1980s and 1990s; these were later codified in the Cartagena Protocol (2000) to the Convention on Biological Diversity (1992). Source: The Convention on Biological Diversity – https://bch.cbd.int/protocol/

The Demographics of the Pan Amazon

One reason it is possible to be optimistic about the future of the Pan Amazon is that none of the countries must deal with an impending demographic explosion. This was not always the case. In the 1970s, high birth rates and Roman Catholic traditions suggested that Latin America was facing a demographic time bomb. Populations in Amazonian countries were expanding by 2.4 per cent to 3.5 per cent annually, a rate that would have doubled their population every twenty years. The colonisation schemes of the 1970s and 1980s were conceived, in part, to create a safety valve for an expanding population.

Except for Venezuela, population growth in the Pan Amazonian countries has fallen to between one per cent and 0.5 per cent per year, placing them in a group of countries that includes the United States, Canada and Spain. Brazil has the lowest rate, while Ecuador and Bolivia have the highest. Venezuela has complicated this panorama with its economic implosion, which has led to the mass migration of approximately seven million economic refugees between 2014 and 2023. Most have resettled in Colombia, Ecuador and Peru, which show uncharacteristically high growth rates during those years.

Currently, the jurisdictions within the Pan Amazon are home to approximately 43 million people, up from twelve million in 1970 (Figure 6.1).* Growth has occurred in a progressive, almost linear, fashion, but there was a major spike in the 1980s when net inflows ranged from 100,000 to 300,000 immigrants per year. If current trends continue, the Pan Amazon should have a total population of about sixty million by 2050 and stabilise at about 65 million by 2100.³ Birth rates in the Amazon are slightly higher than in non-Amazonian jurisdictions, but they follow national trends with about a twenty-year delay. Compared to other tropical forest regions, this is a very moderate demographic scenario and should bode well for the natural ecosystems of the Pan Amazon, as well as the human communities that make it their home.

These projections assume there will not be another mass migration into the region; nonetheless, the impact of past migration is evident. Data from Brazil's 2010 Census shows that more than three million residents of the Legal Amazon were born in one of the other five macro-regions.[†] In

^{*} This statistic includes only the lowland regions in Peru, which are referred to as 'La Selva'; if the entire watershed is considered, then the resident Amazonian population in Peru increases from 2.9 to 9.2 million inhabitants.

[†] The Brazilian statistical agency (IBGE) stratifies its summary data into macro regions: Norte (Acre, Amapá, Amazonas, Tocantins, Pará, Rondônia and Roraima); Nordeste (Alagoas, Bahía, Ceará, Maranhão, Paraíba, Pernambuco, Piauí, Río Grande del Norte and Sergipe); Centro-Oeste (Goiás, Mato Grosso, Mato Grosso del Sur, Distrito Federal); Sudeste (Espírito Santo, Minas Gerais, Río de

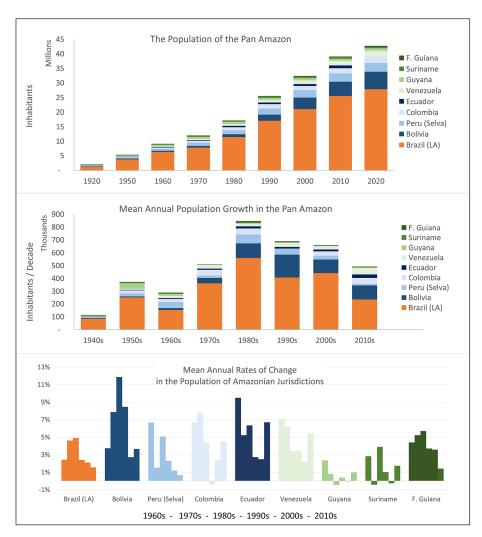


Figure 6.1: The population growth of the Pan Amazon, stratified by country and temporal period. The mean annual change shows a peak in the 1980s and 1990s.

Data sourced from national statistical agencies: Bolivia (INE); Brazil (IBGE); Colombia

(DANE); Ecuador (INEC); F. Guiana (INSEE); Guyana (BS); Peru (INEI); Suriname (ABS); Venezuela (INE).

contrast, fewer than 400,000 Brazilian citizens born in the North now reside outside of the region, and most of them live in the adjacent states of Mato Grosso and Goiás. The census data does not capture second-generation

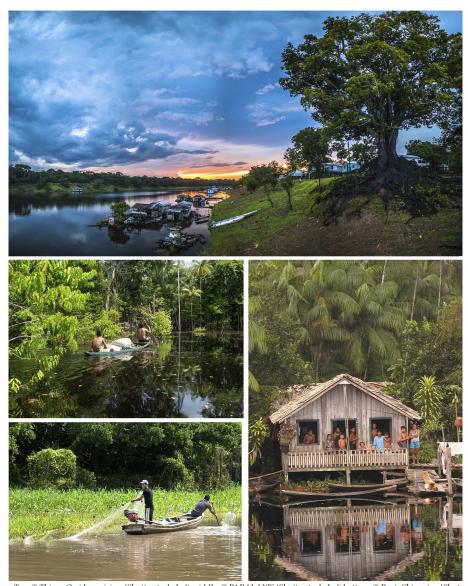
Janeiro and São Paulo); Sur (Paraná, Río Grande del Sur and Santa Catarina). The Legal Amazon is composed of all of the sates of the Norte region, plus Mato Grosso and Maranhão.

immigrants, however; nor does it reveal migratory movements within the Amazon. Perhaps as much as two-thirds of the population of the Brazilian Amazon would fall into these two categories.



Figure 6.2: The place of birth of the population in the Legal Amazon in 1991 reveals that immigrants came from all parts of Brazil. Rondônia had the largest proportion of immigrants, while Amazonas had the largest proportion of native-born inhabitants. Overall, the largest source of migrants was the Nordeste (lower left panel); however, these statistics underestimate the contribution of Nordestinos to Amazonian culture, because many native-born residents are descended from immigrants who arrived from the Nordeste during the two rubber booms.

Data source: IBGE 2023a.



 $\label{lem:condition} \begin{tabular}{l} Top: @ Thiago Orsi Laranjeiras/Shutterstock; Left middle: @ PARALAXIS/Shutterstock; Left bottom: @ RocioChiappino/Shutterstock; Right: @ Brarymi/Shutterstock; Right: @ RocioChiappino/Shutterstock; Right:$

The Ribeirinho communities on the main stem of the Amazon and Solimões River between Iquitos and Belém can trace their demographic history to ethnic groups who inhabited the river and its tributaries prior to the arrival of European missionaries, as well as traders, soldiers, adventurers, rubber workers and escaped slaves who migrated into the floodplain over the last four centuries.

Indigenous people make up about five per cent of the total population, a data point that does not include the *Ribeirinha/Ribereña* communities, who are descended from detribalised Indigenous people, or the *Seringueiros*, whose forebears were early migrants who pursued forest-based livelihoods, not unlike Indigenous communities. Environmental and social advocates often refer to these and other similar groups as 'traditional peoples' and often include them in policy initiatives that seek to conserve natural forest ecosystems in a fair and equitable fashion. The rest of the Amazonian population are either immigrants or descendants of immigrants who arrived after 1960, and now represent probably about eighty per cent of the Amazonian population (Figure 6.2).

The Indigenous Base Line

Prior to the arrival of Europeans, the Amazonian lowlands were home to several hundred ethnic groups living in tens of thousands of villages with a population estimated at between four and fifteen million inhabitants.⁴ Over millennia, these societies transformed landscapes along the main stem of the Amazon River and its major southern tributaries by developing agricultural practices that created dark earth soils, a technology that improved the physical and chemical properties of tropical soils, increased their productivity and ensured their sustainable use over centuries.⁵ These rural societies for the most part lacked large urban centres, but were sufficiently sophisticated to domesticate dozens of plant species and manipulate natural populations in native forests to create managed groves dominated by species that provided food and fibre. Simultaneously, cultures occupying the seasonal forest and savanna regions on the southern rim of the Amazon engineered landscapes by building mounds, causeways and ditch systems that improved crop yields while creating logistical systems that supported even denser populations.6

Tragically, all of these societies collapsed in the fifteenth and sixteenth and centuries, when epidemics caused by pathogens introduced during the Colombian Exchange burned through their communities.⁷ Although archaeology has yet to discover all the gruesome details, these societies were particularly susceptible to pandemics because of their relatively high population density and a trade network that promoted cultural interactions. The population is believed to have fallen to fewer than 400,000 individuals in a cataclysmic demographic collapse.⁸

The number of ethnic groups that existed before the 'Great Dying' is unknown, but remnant populations were largely isolated from one another, giving rise to the long-held perception that the Amazon Forest was a pristine wilderness. The transition to a sparsely populated forest wilderness provided the widely dispersed groups with immunological protection

because of their isolation from one another and the European colonisers. Over the next two centuries, the population continued to decline because of interventions by missionaries and colonial agents who reintroduced pathogens to populations that had yet to acquire immunological defences. The rubber boom of the late nineteenth century led to another round of decimation, as Indigenous communities were enslaved, displaced or massacred. Most survived as ethnic entities by fleeing deeper into the forest, occupying forest landscapes along tertiary tributaries or remote valleys in the Andean foothills and Guiana highlands. Anthropologists estimate that Amazonian Brazil had a population of only about 100,000 Indigenous people in the mid-1970s.⁹

The Brazilian census bureau started collecting data on individual ethnic groups in 1991, and that initial survey suggested their numbers had increased by fifty per cent, a trend confirmed by the next census, with an additional increase of 72 per cent (<u>Table 6.1</u>). The upsurge reflected high birth rates and an increase in their enumeration catalysed by the emergent Indigenous movement (see Chapter 11). Not only were individuals motivated to self-identify as Indigenous, but more remote villages were put on the map by the Brazilian state as it created new Indigenous territories. If growth rates remain the same (around six per cent annually), the 2022 census should show a total Indigenous population in excess of 700,000.¹⁰

Table 6.1: The Indigenous population in the Pan Amazon as reported by national census agencies; values exclude individuals from the Andean highlands who self-identify as Campesinos, Colonizadores or Interculturales.

| | 1991 | 2000 [01/02] | 2005 [07] | 2010 [11/12] | 2017 [18] | 2020 ⁱ |
|--------------|---------|-----------------|-----------|-----------------|-----------|-------------------|
| Bolivia | | 269,323 | | 253,670 | | 244,400 |
| Brazil (LA) | 156,772 | 270,212 | | 433,358 | | 708,500 |
| Colombia | | 103,449 | 106,926 | 168,521 | 229,247 | 233,600 |
| Ecuador | | 136,523 | | 218,573 | | 349,900 |
| F. Guiana | | 14,250 | | 19,000 | | 25,300 |
| Guyana | 46,722 | 68,819 | | 105,723 | | 151,100 |
| Peru (Selva) | 298,529 | 315,752 | 332,975 | 393,793 | 454,611 | 615,600 |
| Suriname | | 14,508 | | 19,344 | | 25,800 |
| Venezuela | 100,614 | 141,167 | | 195,951 | | 272,000 |
| Total | | 1,334,003 | | 1,807,933 | | 2,626,200 |

Italicised values are modelled using estimates derived from the previous census intervals.

Similar demographic rebounds have occurred in the other countries where incentives to claim an Indigenous identity have motivated communities to assert or recover their cultural heritage. ¹¹ Unfortunately, there are also social forces that cause some individuals to abandon their ethnic identity, particularly within urban populations that experience discrimination or racial animus. In Bolivia, for example, individuals often identify by regional affiliation rather than ethnic background; both are affected by a highly polarised political environment.

Key to the demographic revival has been the implementation of policies that prioritise the formalisation of land rights of communities with specific ethnic heritage. *Ribeirinha/Ribereña* communities with obvious Indigenous roots are aware of the legal advantages of having an ethnic identity. This has motivated communities across the basin to rediscover their Indigenous heritage. The trend to increased self-identification is an ongoing process along various stretches of the main stem of the Amazon River, particularly near the junction of the Marañon and Ucayali (Kukama, Yagua), ¹² the Solimões (Tikuna, Miranha, Kukama, Kambeba/Omagua), ¹³ middle Amazon (Mura), and the near the mouth of the Tapajós (Arapium, Borari, Mawé). ¹⁴

The demographic recovery the Amazon's Indigenous cultures must be evaluated, however, in the context of the non-ethnic population, which is the product of 400 years of migration and the subsequent social fusion caused by intermarriage.

The Urbanisation of the Amazon

Rural-to-urban migration is a worldwide phenomenon and the Amazon is no exception. Nonetheless, a very large proportion of its immigrants are small farmers who originally came from the High Andes and Northeastern Brazil, wagering their future on the frontier landscapes of the Pan Amazon. This flow of people into rural communities slowed dramatically after about 2000, when rural families began to move their primary place of residence to urban centres. In Brazil and Bolivia, they tend to move to Amazonian cities, large and small; in Amazonian Peru, Ecuador and Colombia, however, they are more likely to move to cities in the highlands or on the coast.

In Brazil, the relative proportion of rural and urban residents in the Legal Amazon was approximately equivalent before 1990; however, by 2000 more than seventy per cent of residents resided in what the national census bureau considers urban areas (<u>Table 6.2</u>). Most of the rural-to-urban migration has flowed to the six largest metropolitan centres: Manaus, Belem/Ananindeua, São Luiz, Cuiabá/Varzea Grande, Porto Velho and Macapá/Santana. There has been a similar expansion of intermediate and small cities, many of which are the administrative centres for municipalities renowned for their role in agricultural supply chains (Itaitatuba

[AM], Sorriso, Sinop [MT], Tailândia [PA], Ji-Paraná [RO]), corporate mines (Marabá, Parauapebas, Oriximiná [PA]), wildcat mining towns (Itaituba [PA], Pontes e Lacerda (MT), or cattle landscapes renowned for high rates of deforestation (Altamira, São Félix do Xingu [PA], Humaita [AM]). Most doubled their populations between 2000 and 2010 and have been growing at two to three per cent annually over the last decade, a trend that has been replicated in the large and small town categories that are at the heart of the rural economy of the Brazilian Amazon.

Table 6.2: A classification of urban areas in 2017 revealed that 76% of the inhabitants of Brazil reside in an urban centre of some sort.

| Class | Population Range | Number | Total Population | % |
|-------------|-------------------|--------|-------------------------|-----|
| Mega City | > 1,000,000 | 3 | 4,792,010 | 19% |
| Large City | 500,000-1,000,000 | 4 | 2,151,670 | 9% |
| Medium City | 100,000-500,000 | 19 | 3,774,910 | 15% |
| Small City | 50,000-100,000 | 155 | 2,732,188 | 11% |
| Large Town | 10,000-50,000 | 123 | 1,683,074 | 7% |
| Small Town | 3,000-10,000 | 529 | 2,331,040 | 9% |
| Rural | < 3,000 | | 7,681,989 | 31% |

Data Source: IBGE - Instituto Brasileiro de Geografia e Estatística

The Bolivian Amazon has the highest immigration rates of any Amazonian jurisdiction, but this statistic is skewed by the phenomenal growth of the city of Santa Cruz de la Sierra, which has ballooned from about 100,000 residents in 1970 to more than 2.5 million in 2022. Other municipalities that have experienced significant inflows include San Ignacio de Velasco (Santa Cruz), Yapacaní (Santa Cruz), Ivirgarzama (Cochabamba), Cobija (Pando), Riberalta (Beni), Palos Blancos and Caranavi (La Paz). All are located on the agricultural frontier and experience very high rates of deforestation.

In Peru, efforts to promote migration into the Amazon are offset by the economic pull of Lima and other coastal cities; consequently, the Amazonian population has been expanding slightly above the national rate for the last decade (about 1.4 per cent). The observed expansion of the population of the Peruvian Amazon is the consequence of a relatively high birth rate, because emigration currently exceeds immigration in all but one of the lowland departments. Madre de Dios, the site of an ongoing gold rush, is the outlier, as its population has increased by about five per cent annually over the last decade. Most of the newcomers are rural residents working in mining camps.

In the rest of lowland Peru, there is a consistent migration of people from the countryside into regional cities and towns; the rural communities of Loreto have approximately the same population today as in 2000, while its capital city, Iquitos, has experienced only modest growth, increasing from 360,000 to 423,000 inhabitants between 2007 and 2020 (1% annually). Higher growth rates are reported for Pucallpa (2.5%) and Yurimaguas (4.1%), both of which are terminus cities for trunk highways. Regardless, the number of emigrants from Ucayali since 2000 has exceeded immigrants; most are probably young people moving to Lima. 16

Amazonian Ecuador has the highest population growth rate of any region of the country, with a ten-year mean that is approximately double the national average (4% vs. 2%).¹⁷ This apparently is due to a higher birth rate, because migration into the region has essentially stopped, with only 1.3% of respondents self-identifying as immigrants in the 2010 census. The relatively high birth rates and slow pace of inward migration are juxtaposed with the lagging pace of urbanisation, as only 29% (compared to 59% nationally) of the region's residents living in what the census bureau defines as a city or town (Figure 6.3).

In the Colombian Amazon, civil violence pushed millions of rural families into cities. The population of Caquetá fell by 50,000 people between 1993 and 2005, while the town of Florencia expanded by 33,000; tens of thousands more fled to safe havens such as Villavicencio, Huila and Bogotá. The military campaign (*Plan Colombia*) and the 2016 peace agreement changed this dynamic, and Caquetá has been growing at about 3% annually over the last decade. The increase in population is driven largely by a land rush and economic boom, with settlers and rural investors attracted by cheap land being commercialised by land grabbers in one of the Amazon's most lawless frontiers. Ironically, local population centres have grown only marginally with this new migratory wave, but if trends from other forest frontiers hold true, they will soon experience another population boom.

Historically, the Guiana Shield region has a stable, largely urban population, with most inhabitants residing in cities on the Orinoco River in Venezuela or on the coastal plain of Guyana, Suriname and French Guiana. Census data might not accurately reflect the number of people in the gold fields, which have experienced local population booms due to the influx of Brazilian and Venezuelan gold miners in the last decade (see Chapter 5).

Guyana suffered from a mass exodus during the last half of the twentieth century. Slightly more than half of its native-born citizens – 750,000 individuals – have left the country since 1970. The emigration rate declined from highs of near 15,000 per year in the late 1980s to around 5,000 in the last decade. Most emigrants currently reside in the United States and Canada, but it is not uncommon to maintain a second home and support family members. Between 2015 and 2020, the total value of remittances ranged from US\$ 300 million to US\$ 500 million, approximately half of the revenue from the wildcat gold mining sector.

A similar but less acute phenomenon has impacted the population in neighbouring Suriname, where about 250,000 citizens have emigrated, mainly to the Netherlands. Emigration has slowed to fewer than 1,000 citizens per year, which is approximately equal to the number of individuals immigrating or returning to Suriname.

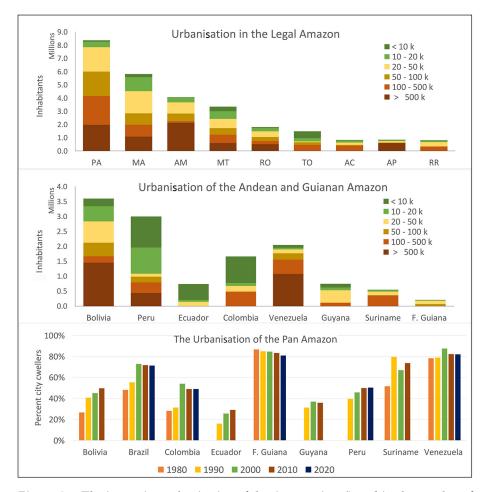


Figure 6.3: The increasing urbanisation of the Amazon is reflected in the number of inhabitants of the lowest administrative jurisdiction (e.g. municipality, canton, district), as reported in recent national census data (top and middle), as well as the relative change between 1980 and 2020 (bottom).

Data sources (top and middle panel): Bolivia (INE); Brazil (IBGE); Colombia (DANE); Ecuador (INEC); F. Guiana (INSEE); Guyana (BS); Peru (INEI); Suriname (AGS); and Venezuela (INE). Data source (lower panel): Thomas Brinkhoff, City Population: http://www.citypopulation.de/

The Legacy of Migration

Most of the Pan Amazonian population consists of immigrants or their descendants. They arrived over centuries, motivated by historical events that moulded their self-identity. This diverse assemblage of people represents a broad range of cultural and ethnic backgrounds, which is further stratified by economic opportunity – or the lack thereof.

Immigration into the Amazon followed routes that were determined by proximity and access, first via the river network and then by highways that were constructed specifically to facilitate colonization. The differences amongst the groups are reflected in their production systems, which explain, in part, why the different regions of the Amazon have followed distinct development trajectories.

The First Wave: Jesuits versus Bandeirantes

The first European explorers of the Amazon were soon followed by missionaries affiliated with the Society of Jesus, more commonly known as Jesuits. Although few in number, probably under 3,000 individuals over 150 years of mission activity, they had a massive impact on the cultural and political history of the Pan Amazon. Nominally non-state actors, these highly educated clerics played an important role in stabilising the frontier zones that separated the Spanish and Portuguese empires. The Jesuits deliberately founded outposts in remote landscapes as part of their evangelical mission to convert native populations. Isolation, however, also allowed them to pursue their philosophical agenda free from the interference of colonial power. Their approach relied on innovative tactics, such as preaching in the native language, but their goal was also novel: to create autonomous communities based on early Renaissance concepts of equality and a spiritual vision based on the Christian Gospels.*

In the Northeast, Jesuits based in Quito accessed the Western Amazon via the Río Napo, a route originally pioneered by the Spaniard Francisco Orellana in 1540, which was followed in reverse by Pedro Teixeira in 1637. The Jesuits soon discovered alternative routes to the Río Marañón via the Santiago and Pastaza rivers, which they used after being invited into the region by colonial authorities who were seeking an another means of harnessing the labour of native populations.† Undoubtedly, the arrival of

^{*} The values expressed by the parables and teachings attributed to Jesus in the Gospels, such as love your neighbour as yourself, love your enemy, ask God for forgiveness, etc.; see: https://christian.net/resources/what-are-the-core-teachings-of-jesus/

[†] The conventional system for exploiting native labour was the *encomienda*, a version of enslavement that awarded the *conquistadores* control over the labour of a native community, which was replaced by the *repartimiento*, an equally



Courtesy of The Library of Congress. Samuel Fritz produced the first relatively accurate map of the main stem of the Amazon River when he traveled from Jaén (Peru) to Belém (Brazil) in 1689. Father Fritz established dozens of missions among the Omaguas and served as the Jesuit superior for Maynas between 1701 and 1710 (Dias 2012).

Image location: Library of Congress, Digital ID: 2021668377, https://hdl.loc.gov/loc.wdl/wdl.1137

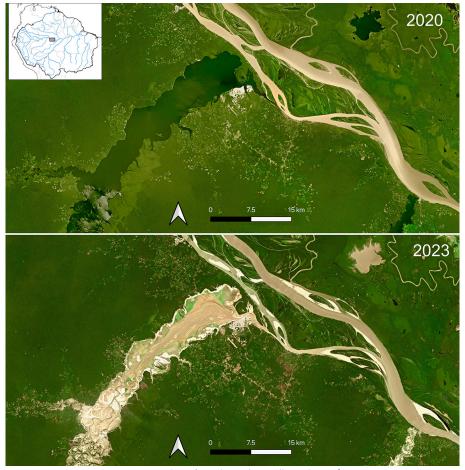
Teixeira and his reported territorial claim reinforced the strategic imperative of establishing Spanish sovereignty in the hinterlands of South America.

The first mission was established in 1640 at a military post (San Francisco de Borja) near the junction of the Marañon and Santiago rivers. From the *Misión de Maynas*,* named after an extinct Indigenous tribe, the Jesuits sought converts from numerous ethnic groups, including the Jivaroan peoples (Shuar, Achuar, Huambisa and Aguaruna), the Omagua (Kambeba) and Kokoma (Kukama-Kukamiria).²⁰ At their greatest extent, the missions established by the Jesuits from Quito stretched into the Solimões section

harsh system that mimicked the *minka* system of the Incas. Neither system was effective in the lowland forest, where indigenous groups could disappear into the forest or wage guerrilla warfare and refuse to submit to the colonial authorities.

^{*} There are no extant speakers of the Mayna language, but the group is believed to be related to the Jivaroan family of languages. Source: Rojas-Berscia 2015.

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Tefé in the state of Amazonas was founded in 1688 by Samuel Spitz, a Jesuit missionary, and is one of the oldest settlements on the Rio Solimões section of the Amazon River (Velasco 1841). The region was targeted for development in the 1970s as part of the POLAMAZONIA program, but avoided widespread deforestation because it is not accessible via the federal highway network. Top: an image from December 2020 showing normal (rainy season) water levels. Bottom: an image from October 2023 showing water levels during a century-scale drought event.

of the Amazon River, with outposts at Coari and Tefé in what is now Amazonas state (<u>Figure 6.4</u>).

This was the period when Portuguese slavers, known as *bandeirantes*, preyed on Indigenous communities on the banks of the Amazon River and its tributaries.* These raids became so frequent that many native inhabitants sought refuge in the missions, which had organised Indigenous militias. The Jesuits preached a philosophy of peaceful coexistence among their congregants, many of whom belonged to mutually antagonistic warlike tribes; nonetheless, they were not unwilling to use force to further their own objectives. The militias were more than a self-defence force and were primarily used to forcefully recruit converts among forest-dwelling natives.²¹

The settlements, known as *reducciones* because they concentrated dispersed rural populations, were controlled by a Jesuit priest in the role of a benevolent autocrat. The number of mission outposts varied, reaching a maximum of about 75 before a demographic collapse triggered by a smallpox epidemic in 1666. They expanded after 1690 because of the arrival of a highly motivated class of Jesuits, and again in 1750 when the Jesuits reinforced their presence near the mouth of the Río Napo following the signing of the Treaty of Madrid, which recognised the principal of *uti possidetis*, the priority of possession when determining sovereign borders. One of those settlements eventually developed into the regional capital of Iquitos, which was considered a counterweight to the Portuguese mission and military post at Tabatinga.²²

Ironically, this evangelical effort, which was designed to protect Indigenous people, triggered the collapse of the Indigenous populations of the Western Amazon. In 1660, Maynas was home to about 200,000 individuals, about half of whom lived in the missions.²³ The Jesuits reported the death of 80,000 natives in 1666 and 60,000 in 1681; thousands more perished in the epidemics of 1749, 1756 and 1762.²⁴ When the reign of the Jesuits ended in 1767, there were only 25 active missions with about 14,000 residents.²⁵

The Jesuits were also active on the Portuguese side of the colonial frontier. Their activities are less well known, however, because they were eclipsed by the actions of colonial authorities and *bandeirantes*. While the Jesuits in Maynas organised their utopian society in the absence of the state, the Portuguese Jesuits shared the geographic space with the military, as it established a network of forts across the region. Military, civil and religious activities were all managed from Belem, which was founded in 1616, and

^{*} Militias organised by mixed-race colonists carried the Portuguese flag (bandeira) into the hinterlands of the Amazon, the Planalto de Mato Grosso and the Upper Paraná-Paraguay watershed; they were ruthless adventurers who ensnared Indigenous people using violence and trickery; in the 18th Century, their economic motivation shifted from enslavement to gold.

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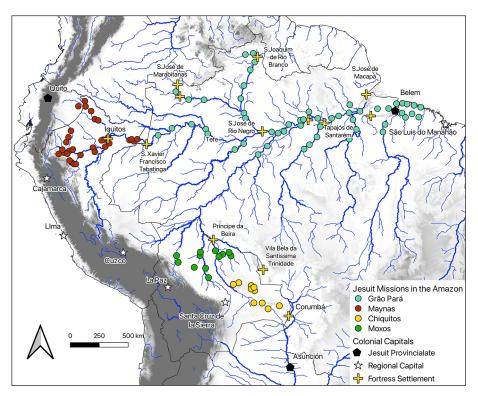


Figure 6.4: The first Jesuit mission in the Maynas Province was established at a military outpost near the confluence of the Marañón and Santiago rivers in 1637. Over the next 130 years, more than 150 reducciones were established, although only 33 were active at the time of the Jesuit expulsion from the Spanish colonies in 1768 (Negro-Tua 2013). In the Portuguese territory of Grão Pará, the Jesuits established dozens of missions in the seventeenth century, but those north of the river were transferred to other clerical orders in 1693 as a crown strategy to limit the secular power of the Jesuits, who were evicted from Portuguese territories in 1759. The reducciones in what is now Bolivia were administratively linked to the Jesuit Province of Asunción (Paraguay) and were organised into two groups: (a) Moxos in the inundated savannas associated with the Rio Mamoré; and (b) Chiquitos in the seasonal forest and Cerrado savannas in the headwaters of the Rio Guaporé.

Data sources: Saito 2015 and Groesbeck 2018.

later from a fort established in 1666 at the junction of the Solimões and Rio Negro, which eventually grew into the city of Manaus (<u>Figure 6.4</u>)

Despite their less prominent role, the Portuguese Jesuits had a similarly large impact on the Indigenous nations of the Amazon. Their presence began when a charismatic priest, Luís Figueira, convinced the royal government to support the creation of a network of missions within the colonial jurisdiction of the *Estado do Maranhão*.* Starting in 1639, they created autonomous villages (*aldeias*) while promoting a policy referred to as *liberdade dos indígenas*.²⁶ Although the concept of liberty was essentially limited to a status of non-slavery that was contingent on a regime of Jesuit autocracy, it conflicted with the ambitions of the *bandeirantes* and civil authorities, who viewed Indigenous populations as a source of slave labour.²⁷ The missions pursued two objectives: providing a refuge for Indigenous people and demonstrating an alternative economic model that was more palatable to their supporters within the Portuguese Court.²⁸

As in Maynas, the Jesuits compelled multiple different ethnic groups to cohabit in mission settlements, where they were schooled in a common language, known as *Língua Geral*, a simplified dialect of Tupi-Guaraní that modern linguists refer to as *Nheengatú*.²⁹ Agriculture, presumably on black earth soils, provided workers and patrons with essential foodstuffs, but revenues were derived from the commercialisation of forest products collectively known as the *drogas do sertão* (see Chapter 8). On Marajó Island, the Jesuits laid claim to vast natural savannas and introduced cattle, the first in the Amazon, for the production of hides, tallow and dried beef. The herd of more than 200,000 head of cattle was their most economically valuable asset and among the first to be seized by colonial authorities.

The success of the Jesuits, and the religious colonialism that characterised the Catholic Church in the seventeenth century, motivated other religious orders to pursue similar missionary programs, which led to a competition for souls amongst the monastic orders. In 1693, King Pedro II restricted the Jesuits' evangelical activities to the south bank of Amazon River and its associated tributaries; simultaneously, he granted the Carmelites, Mercedarians and Franciscans domain over missions in the northern half of his Amazonian territories (Figure 6.4). The Carmelites were the most consequential, because they assumed responsibility for a string of missions on the Rio Negro and Rio Branco, which established Portuguese sovereignty

^{*} The Portuguese empire was divided into states: the Estado de Maranhão (1621–1750) was reorganised to create the Estado do Grão-Pará e Maranhão (1750–1772) and the Estado do Grão-Pará e Rio Negro (1772–1821), which included the modern states of Amazonas, Amapá, Roraima and Pará. They were united with the Estado do Brasil in 1821 to form the Império do Brasil when the Brazilian state gained its independence from Portugal. See Barman 1994.

on the frontier lands adjacent to the Spanish Empire's Viceroyalty of New Granada, today Colombia and Venezuela.

As in Maynas, the Indigenous communities suffered from wave after wave of infectious diseases; at least one-third of the population died on the Solimões in 1647 and a similar proportion on the upper Rio Negro in 1740. 30 These losses were aggravated in the Portuguese Amazon by the *bandeirantes*, whose business model depended upon capturing or buying Indigenous people for transport to the lower Amazon, referred to as 'descents', for sale to colonists establishing agrarian enterprises in Maranhão. Despite the tensions between the Jesuits and the colonial actors, they coexisted until 1750, when the religious orders were ordered to surrender the economic component of their missions to colonial authorities. In 1759, the Jesuits were expelled from Portugal and all of its colonies. 31

In the Southwest Amazon, Jesuits based in what is now Paraguay established two clusters of missions: *Chiquitos*, in the seasonal forests on the Brazilian Shield (Santa Cruz, Bolivia), and *Moxos*, in the vast inundated savannas in the upper watershed of the Rio Madeira (Beni, Bolivia). As in Maynas, they were characterised by their isolation and their ability to organise multiethnic, self-sufficient agrarian societies (<u>Figure 6.4</u>).

The Jesuits explored the *Llanos de Moxos* and its Indigenous people starting in the 1670s, and the first permanent settlement was established in 1682 at Loreto, on the Río Mamoré, a tributary of the Madeira situated about 200 kilometres north of Santa Cruz de la Sierra. Subsequently, they established mission outposts downstream on the Mamoré, followed by others on the western edge of the inundated savannas, which created a link to the colonial authorities in Peru (1683–1700). A second phase expanded into the savannas south of the Guapore River (1700–1715) demonstrating again the geopolitical calculations that motivated the actions of the Spanish Jesuits.

As in all of the *reducciones*, natives were both forcefully inducted and enticed into the settlements, which by 1736 encompassed 24 missions with a population of 37,000.³² A typical settlement cultivated cassava, maize, sugar cane, cocoa, cotton, rice and coffee, while housing workshops were dedicated to iron work, carpentry, weaving and tannery, as well as warehouses, a sawmill and slaughterhouse. The Moxos was particularly renowned for its cotton cloth and a livestock herd that numbered 50,000 cattle and 27,000 horses in 1767.³³

Missions were designed to manage the annual floods that characterise the *Llanos de Moxos*, but they were periodically beset by catastrophic floods that triggered epidemics of dysentery in the sedentary villages. Even more serious were one smallpox epidemic in 1731, presumably triggered by the clergy themselves, and another in 1763, caused by the arrival of Spanish troops sent to counterbalance incursions by Portuguese *bandeirantes*.³⁴ Dis-

The Legacy of Migration



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Jean-Baptiste Vaudry 1906–1913, courtesy of the Museo de Historia, Universidad Autónoma Gabriel René Moreno

San Francisco Xavier de los Piñocas (San Javier, Santa Cruz, Bolivia) was established in 1691 as part of the Reducciones de Chiquitos (today Chiquitania). Jesuits obligated different tribes to cohabit mission outposts, which led to a unique hybrid Indigenous culture underlying a strong avocation to the Catholic faith. Following the expulsion of the Jesuits, the Chiquitanos were enslaved by secular authorities who imposed a feudal labour model centred on the latifundia.

eases reduced the population to fewer than 19,000 when the Jesuits were expelled from the region in 1767.

The ten Chiquitos missions established between 1691 and 1760 were among the most successful of the Jesuit *reducciones*.³⁵ At their peak, they were home to between 20,000 and 40,000 congregants. As in the other missions, different ethnic groups cohabited in villages and spoke a universal version of Guaraní. The Chiquitos missions were all associated with natural (*Cerrado*) grassland, which supported 32,000 cattle and 800 horses.³⁶ Each village was self-sufficient and capable of producing a surplus for trade with the outside world.³⁷

The Chiquitos missions were established in a region with no navigable rivers; consequently, they communicated with the outside world using horses and oxen. Despite their isolation, they were still exposed to attacks by *bandeirantes* and were equally distrustful of their Spanish allies in Santa Cruz de la Sierra, who had a history of conducting ethnic warfare, as well as a proclivity for exploiting the labour of Indigenous people.³⁸ Self-defence forces protected their residents and provided a coercive tool for attracting new congregants.

Fortunately, the climatic and cultural conditions in Chiquitos, now known as *Chiquitania*, preserved much of the architectural and artistic legacy of the Jesuit period. Jesuits, then as now, embraced education as a vocation; consequently, they tended to be competent administrators and had technical skills or were proficient in the arts. Many hailed from the Hapsburg territories of Central Europe and were among some of the most enlightened individuals in the Catholic Church.*

The residents of Chiquitos and Moxos maintained their identity as Indigenous people. Rather than identifying with a specific linguistic or ethnic group, however, they assumed a composite identity that reflected their shared Jesuit past. Known as Chiquitanos and Moxeños, they speak Spanish and are among the most numerous Indigenous peoples in the Amazon (see Chapter 11).

The Post-Jesuit Panorama

Because of their privileged status as a transnational religious institution and their allegiance to the pope, the Jesuits enjoyed considerable autonomy from both the Spanish and Portuguese crowns. This status allowed them to avoid taxes and disregard the colonial elites, who envied their ability to monopolise labour and resources. Colonial dissatisfaction was exacerbated by palace intrigue in Lisbon and Madrid, as well as in Rome, which led

^{*} Of the 161 Jesuits known to been stationed in Maynas, 32 were of German, Swiss or Czech ethnicity, while 20 were from Italy; the majority were native-born criollos (63) or from Spain (43). Source: Jouanen 1941.

to their expulsion from the Portuguese and Spanish empires in 1759 and 1767, respectively.*

In Maynas, Chiquitos and Moxos, responsibility for administering the productive assets of the *reducciones* was assumed by civil authorities as representatives of the crown, while the missions' spiritual operations were passed to diocesan clergy. Wholesale dysfunction motivated the Spanish to transfer the religious system to the Franciscans in 1780, but the separation of the economic means of production from religious control denied the friars the means of supporting the missions, and by 1804 the entire system had essentially collapsed.³⁹

In Maynas, the advance of the Portuguese was kept in check by the military post at Iquitos, but access to the region was now organised via the colonial towns on the upper Marañón (Jaen) and Huallaga (Moyobamba) rivers, which were linked to the coast by an Inca road that traversed a low point in the Andean Cordillera (Huancabamba Gap, see Chapter 5). Administrative control was now exercised from Lima (*Virreinato del Perú*) rather than Quito (*Audiencia de Quito*). This arrangement was formalised in 1801, when the region was organised as the *Comandancia General de Maynas*. The change in jurisdictional status was repudiated by the Republic of Ecuador in 1809, but Peru prevailed because the logistical connections via the Marañón and Huallaga rivers were geopolitically durable compared to the tenuous links with Quito, which had ceased to function after the Jesuit exodus.

Despite the jurisdictional changes, the economy fostered by the Jesuits withered away, and the population, now much diminished, reverted to the subsistence livelihoods that had always been (and remain) a mainstay of the region. Maynas essentially slumbered through the following century, until the rubber boom triggered the next stage of its historical evolution. Nonetheless, the acculturation of the region's native inhabitants, mostly of the Omagua ethnic group, ensured their engagement with colonial traders and military garrisons. Their descendants are the *Ribereños* who now dominate the political economy of lowland Amazonian Peru.

In Chiquitos, the *criollo* elite in Santa Cruz de la Sierra quickly moved to appropriate the economic assets of the Jesuit missions. Some of the Indigenous residents decamped to the forest, but most came under the subjugation of the colonial, soon to be Republican, elites. The newcomers occupied the

^{*} Pope Clement XIV suppressed the *Compañía de Jesús* in 1773 in response to pressure from the monarchs of Spain, Portugal and France, who sought political control over their own domestic churches. Ironically, the Jesuits were restored in 1814 to help the church and the monarchs combat the rising tide of revolution that was sweeping Western Europe and the Americas. Source: Weidenkopf 2019.

[†] The dispute between Peru and Ecuador led to three wars (1857–1860, 1940 and 1995) and was resolved only in 1998, after which the border areas in the Cordillera del Condor were open for mineral exploitation (see Chapter 5).

villages, while the Indigenous residents were relocated to 'ranchos' some distance from the main village. Typically, each rancho was associated with an agricultural estate, and its inhabitants acquired a serf-like status similar to that of the *latifundio* system that prevailed in the Andean highlands.

In Moxos, the process was slower because of its isolation and the Indigenous residents' willingness to maintain the basic structure and economic production system. Alcides d'Orbigny, the French naturalist, visited the region in 1833 and observed that the mission structure remained essentially intact, with approximately 20,000 residents who conserved their native languages. ⁴⁰ Pioneers from Santa Cruz were migrating into the region and appropriating large tracts of land for cattle ranching, however, and by 1850 the number of individuals claiming European descent increased from 57 to more than 1,100. The cattle herd also grew, to more than 150,000 head. ⁴¹

In contrast to Maynas, Chiquitos and Moxos, the pace of colonisation in the Portuguese Amazon accelerated following the expulsion of the Jesuits, partly because the departure of the missionary orders coincided with the ascendency of the Marquês de Pombal as prime minister in the court of King Jose I. Pombal was responsible for a monumental transformation of the imperial government, but he was also a self-interested aristocrat who induced the king to grant a monopoly trading concession in 1755 to the *Companhia de Comércio do Grão-Pará e Maranhão*. The company, which was modelled on the charter companies of Britain and the Netherlands, privatised the administration of crown assets while confiscating the economic assets of the mission villages. ⁴² Its primary business model was to accelerate the African slave trade in the coastal provinces of Maranhão, but it also radically changed the economics and demographics of the Amazon floodplain and adjacent landscapes. ⁴³ The *Companhia* appropriated the lucrative trade in the *drogas do sertão*, a move that brought it into direct conflict with the Jesuits. *

The separation of economic and religious activities was accompanied by the establishment of a system referred to as the 'Diretoria', which, at the level of the mission village, meant replacing the Jesuit autocrat with a civil servant representing the Companhia. These individuals were compensated based on a percentage of the trade generated by the mission and their ability to supply Indigenous labour to colonists and government agents who were pouring into the region as part of a policy to establish the presence of the Portuguese state.

The *Companhia* consolidated its presence by establishing military posts between 1767 and 1777 at the junction of the Solimões and Javari rivers (Tabatinga), the upper Rio Negro (São Gabriel de Cachoeira) and the Rio Branco (São Joaquim). It also extended its presence up the Madeira

^{*} The Jesuits were also highly critical of the expansion of the African slave trade, which was another source of conflict between Pombal and the religious order.



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The Real Forte Príncipe da Beira (Costa Marques, Rondônia, Brazil) was established in 1775 to defend Portuguese claims to Amazonian territories from Spanish incursions following the expulsion of the Jesuits from the Moxos missions in modern day Lowland Bolivia.

Image location: https://commons.wikimedia.org/wiki/File:Forte_Pr%C3%ADncipe_da_Beira.jpg

and Guaporé rivers by establishing settlements at Vila Bela da Santíssima Trindade, in what is now Mato Grosso, and at the Forte Príncipe da Beira, near Costa Marquez in current-day Rondônia. ⁴⁴ The extension of Portuguese sovereignty east of the Guaporé coincided with the expansion of *bandeirante* excursions from São Paulo into Mato Grosso in their ongoing thirst for gold, slaves and territories.

These forts and their associated mission settlements established an effective border between the Spanish and Portuguese that was formalised by the treaties of Madrid (1750) and Ildefonso (1777). Ironically, the company's monopoly ended in 1777, when Pombal was banished from the court, and was dissolved by an edict of the queen in 1778.⁴⁵ Nonetheless, the system perfected by the *Companhia*, which included state control of the mission

villages, dominated the economy of the Portuguese and Brazilian Amazon for another half century.

The first years following the change in governance saw an upsurge in the activities of *bandeirantes* and the decline of the tribes of the lower Amazon. As these people were decimated by disease and forced relocation, the *bandeirantes* expanded their expeditions upstream into the Solimões and Rio Negro. Tens of thousands of individuals were captured and transported (descended) to the lower Amazon, where they were cast into a social milieu that robbed them of their ethnic identity. Upriver, demographic transformation was propelled by soldiers, border functionaries and *bandeirantes* who took local women as their wives and concubines, creating a local elite that dominated the trade routes that were growing up around the *drogas de sertão*, the term used to describe the forest products that were the basis of the Amazonian economy in the period between the Jesuit expulsion and the onset of the rubber boom in the late nineteenth century (see Chapter 8).

Five tribes stand out for their role in resisting, avoiding or succumbing to the Portuguese: the Omagua, who were closely associated with the floodplain islands of the Solimões; their neighbors, the Tikuna, who lived in the upland forests north of the Solimões floodplain; and further downstream, the Mura, who occupied the lower Madeira and middle Amazon floodplain until they were displaced by the Murunduku, who dominated the Rio Tapajós, while the Manao controlled the middle stretch of the Rio Negro.

The Omagua were incorporated first into the mission settlements and then into the *Ribeirinha* culture, while the Tikuna avoided contact and assimilation by retreating into their forest sanctuaries. The Mura waged a guerilla war for more than a century, but surrendered to the Portuguese in 1789 as a strategy to escape attacks from the Murunduku; today they self-identify as Caboclos. The Manao, who had once controlled passage on the river, declined gradually and eventually disappeared in face of repeated attacks by *bandeirantes*. The Murunduku and Tikuna survived by using a combination of avoidance and guile; today they are among Brazil's most resilient and largest Indigenous nations.⁴⁶

Caboclos, Quilomobolas and Maroons

People living along the Amazon and Solimões rivers bear the imprint of their Indigenous forebears, as well as changes induced by missionaries, bandeirantes, colonists and traders. Erosion of their Indigenous heritage was gradual. Over time, they became known as Caboclos, a racialised term for a demographic group of mixed Indigenous and European heritage. Historians estimate that, by the first half of the nineteenth century, Caboclos represented the largest demographic group in the Provincia de Grão

 $Para^*$ (~40,000), surpassing ethnic Indigenous people residing in former mission settlements (~33,000) and an increasing number of enslaved Africans (~30,000). All remained under the nominal control of individuals of European descent (~15,000).⁴⁷

Despite the autocratic nature of the regional government, numerous enslaved Indigenous and African people escaped their captors; they were, after all, skilled practitioners of the subsistence economy and could reconstitute their livelihoods after escaping from their overlords. The region was also beset with violence and unrest, which reached a peak in 1835, when a peasant rebellion, known as the *Cabanagem*, overturned the status quo. This uniquely Amazonian revolt was led by a coalition of *Caboclo* peasants, displaced Indigenous refugees and urban poor who rose up in violent protest against slave traders, plantation owners and merchants. Surprisingly, the rebels overthrew the regime in Belem and controlled the government for more than a year. Their success was partly due to the participation of urban elites enticed by the idea of an independent state free from the domination – and neglect – of Southern Brazil.⁴⁸

It was a violent affair from its inception, because of internecine conflicts among its protagonists, suppression by federal troops and an extended guerilla war that lasted four years after the rebels were ejected from Belem. The population in Pará, estimated at around 120,000 before the revolt, was reduced by an estimated thirty to forty per cent, ⁴⁹ a remarkable number that reveals the brutality of the armed forces that intervened to reassert federal control. The reported deaths may be inflated by another demographic phenomenon, however.

The *Cabanagem* was also an ideal opportunity for the enslaved to escape their masters. Displaced Indigenous people could escape and return to their villages upriver or, more likely, disappear into the *Caboclo* culture. That was not an option for Black people, who were subject to harsh treatment in a country in constant fear of a slave uprising. They responded by fleeing to remote landscapes to establish agrarian communities known as *quilombos* (see <u>Text Box 6.2</u>)

A similar foundational narrative describes a cultural demographic in Guyana, Suriname and French Guiana. These three geographic jurisdictions share a history of colonial domination by non-Iberian countries and an economy based on sugar cane plantations. Like many European colonies of the nineteenth century, they were dependent upon the slave trade from West Africa. In the eighteenth and nineteenth centuries, large numbers of these slaves escaped captivity and established free communities in the forest interior of Suriname and French Guiana. In the early years, the escapees

^{*} The jurisdiction that was created in 1822 after the emancipation of the Brazilian state, which contained all of the lands formerly in the *Estado de Grão Pará e Río Negro*.

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Text Box 6.2: Quilombos and Quilombolas

The word *quilombo* originates from the term *kilombo*, which etymologists believe is derived from a Bantu dialect common in Angola, a former Portuguese colony, and which refers to a temporary camp (Etimologia 2023). In colonial Brazil, the word was adapted to designate a place of refuge for fugitive slaves, who were known as *Quilombolas*. There were at least 1,000 *quilombos* in the Brazilian Amazon. About a third are located within 100 kilometres of the Amazon River, with another third located along the Rio Gurupi, on the border between Maranhão and Pará (IBGE 2020). These communities are now populated by families that have intermarried with their *Caboclo* neighbours and pursue traditional subsistence livelihoods based on agriculture, animal husbandry and forest products. Nonetheless, they have maintained their identity and culture, which are tightly bound to the geographic spaces they recognise as their own *quilombo* (Abreu 2018).

* The most famous *quilombo* was Palmares, where between 10,000 and 20,000 escaped slaves created a self-governing entity between 1605 and 1695. It withstood several attempts by military forces to suppress its autonomy, but was eventually defeated by *bandeirantes* on contract with the government of Pernambuco. See Schwartz 2017.

were forced to defend themselves from colonial governments seeking their capture. They eventually settled into coexistence with colonial administrators, established self-governing communities and pursued livelihoods based on forest resources and subsistence agriculture. These communities have created an ethnic identity referred to as *Maroons*, which consist of six main tribes with different cultural and linguistic traditions.*

After the abolition of slavery in the nineteenth century, the colonial governments transported contract labour from British-ruled India and the Dutch East Indies. This shared history sets them apart from Latin America and a cultural tradition more closely linked to the Caribbean than the Amazon. These groups are more numerous than their fellow citizens of African descent and have considerable economic and political power. The Maroons have faced adversity and discrimination throughout their existence. For example, in the 1970s the newly independent government in Suriname sought to evict them from their traditional lands during the construction of the Brokopondo Reservoir. ⁵⁰

Coincidentally, their territories overlay the Guiana greenstone belt and the Maroons have become major actors in wildcat gold mining operations, starting in the late 1890s during the region's first gold rush and

^{*} Eastern communities are populated by the Djuka, the Aluku and the Paramaka clans, while the central branch consists of the Saramaka, Matawai and Kwinti clans. Maroons speak their own distinctive languages. Ndjuka, is spoken by the Djuka, Aluku and Paramakam, while Saramaccan is spoken by the Saramaka and Matawai. Source: World Directory of Minorities and Indigenous Peoples, https://minorityrights.org/minorities/maroons/

continuing into recent decades. Some participate as a source of labour, but the more enterprising have obtained mining concessions, which they sublet to Brazilian wildcat miners known as *garimpeiros* (see Chapter 5). Like wildcat gold mining landscapes across the Pan Amazon, most activity occurs within the 'informal' economy, where royalties and taxes are seldom paid and environmental regulations are routinely ignored.⁵¹ Most use mercury to concentrate the gold, and in the process poison themselves and their traditional lands.⁵²

The Rubber Boom

The invention of vulcanised rubber (1839), followed by the popularisation of bicycles (1870s) and the invention of the automobile (1886), led to exponential growth in the demand for rubber, which was manufactured from latex produced by several species of trees endemic to the Amazon forest (<u>Figure 6.5</u>). The supply of rubber was a component of the trade in the *drogas de sertão*, which included latex collected from multiple species of

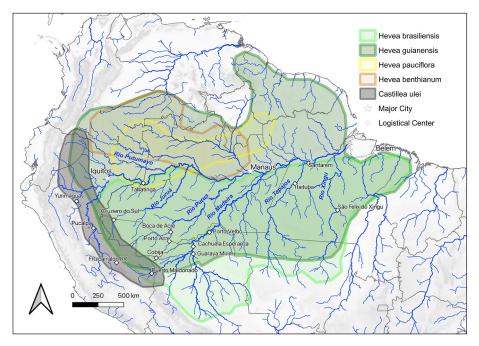


Figure 6.5: The extent of the rubber economy was defined by the distribution of Hevea, where the latex was sustainably harvested by tapping over many years, and Castilla, where collectors sacrificed the tree to harvest a much larger, but one-time, crop of latex.

Data source: Priyadarshan and Goncalves 2003.

Culture and Demographics Define the Present





Left: © Joa Souza/Shutterstock; Right: © Juliana Kawasaki/iStock

The traditional method of collecting latex is a labour intensive process that consists of tapping trees to collect the liquid, which is congealed into pelotas de seringa using smoke and heat. These were transported to regional centres for export to global and national markets.

two genera, *Hevea* and *Castilla*. The most valuable species were members of the genus *Hevea*, because their latex could be tapped rather than harvested from a felled tree, as was the case for *Castilla*. This difference soon led to the development of a *Hevea* supply chain anchored in remote outposts permanently manned by individuals who would collect the latex, process it into rubber using artisanal technologies and sell it to a trader for transport downriver to an export agency in Belem, Manaus or Iquitos.

At the outset, most rubber was collected by Indigenous communities residing in mission villages or *Ribeirinhos* who supplemented their subsistence livelihoods with trade in forest products. Strong annual growth in the demand for rubber quickly exceeded the ability of the resident population to provide a steady supply, however, stimulating the flow of migrants into the region.

During the last half of the nineteenth century, mass migration was facilitated by new technologies. Telegraph systems and newspapers alert-

ed individuals to new opportunities, while trains and steamships would transport them across oceans and continents. Social mobility catalysed by industrialisation and democratic revolutions contributed to sudden migratory events symbolised by the gold rushes of California, the Yukon and South Africa. The Amazon became a global destination for adventurers seeking to strike it rich by joining a new global commodity boom.⁵³

Brazil

Most of these international migrants were poorly suited to the task, however, and the most successful rubber merchants were native-born entrepreneurs. These men were adept at leveraging local knowledge with political influence and the use of violence to dominate the wilderness landscapes they claimed as their fiefdoms. Known throughout the world as 'rubber barons', in Brazil they were called *seringalistas*.* They were successful because they acquired monopoly control over a specific tributary, which allowed them to ruthlessly exploit their workers, who were known as *seringueiros*.

The *seringalistas* would advance the novice *seringueiros* supplies at inflated prices, establishing a debt so large that the worker could never fully repay it – a condition for his departure from a remote rubber post. Known as *aviamento*, this form of debt slavery was particularly effective for entrapping migrants who were not skilled at living off forest resources and who lacked a support system of Indigenous or *Ribeirinha* communities that might have offered them an escape route.

Among the most consequential of Brazilian rubber barons was João Gabriel de Carvalho e Melo, an explorer and entrepreneur who was among the first individuals to discover the rich stands of *Hevea* trees on the upper Purus River in the late 1850s. This occurred at the dawn of the rubber boom, and the demand for *seringueiros* had already surpassed the capacity of the *Ribeirinha* communities to provide the requisite labour. João Gabriel returned to his hometown of Uruburetama, Ceará, where he recruited a cadre of friends and relatives who would return with him in 1874 to establish a series of rubber posts on Acre and Purus rivers.⁵⁴

Their migration coincided with a series of calamitous events in Northeast Brazil, including the collapse of the international cotton market (1865–1870) and a multi-year drought (1877–1880) that destroyed the regional economy. Famine forced more than 200,000 *Nordestinos*, almost all *Caboclos*, to emigrate. Approximately half headed for the Amazon, where the *seringalistas* were ready to loan them money and locate them on remote

^{*} Brazilian rubber barons lack the international notoriety of their Peruvian and Bolivian peers, but they were far more numerous and powerful. They included João Gabriel de Carvalho e Melo, Luis Gálvez Rodríguez de Arias and Plácido de Castro (Purus); João Monteiro (Madeira); Manoel Quirino Paes and Paulo da Silva Leite (Tapajós); and Ernesto Accioly de Souza, Agrário Cavalcante and José Porfírio de Miranda Júnior (Iriri/Xingu).

forest tracts as contract employees. Approximately 30,000 *Nordestinos* moved into the upper reaches of the Purus and Juruá rivers. ⁵⁶

This inflow of Brazilian citizens further consolidated Brazil's hold on its Amazonian territories and set the stage for one final expansion of its dominion, despite the 1867 Treaty of Ayacucho, which had adjudicated the territory of Acre to Bolivia.* Acre was a roadless forest wilderness, and Bolivia had yet to effectively occupy the territory, which was populated entirely by Indigenous tribes. The region could be easily accessed by river from Manaus, however. Once it became obvious that the region was a treasure trove of natural rubber, the Bolivian government moved to occupy the province and enlisted influential foreign investors to finance the region's development.† They acted too late.

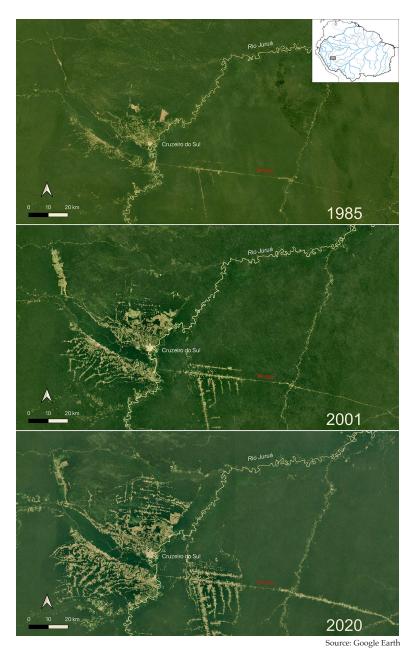
Tens of thousands of Brazilians poured into Acre in the 1890s. Although Bolivian troops staged campaigns and counterattacks, they had to traverse dense forest landscapes from their military outposts on the Río Madre de Dios. Known in Brazil as the *Revolução do Acre*, it was fought by an army of immigrant filibusters who created a short-lived independent republic (1899–1903). † Although they acted autonomously, they enjoyed the support of authorities in Manaus, Belem and Rio de Janeiro. Brazil formally annexed the territory after the two countries signed the Treaty of Persépolis in 1903 (see <u>Annex 6.1</u>). By 1910, Acre had a population of approximately 50,000 and was producing about sixty per cent of the rubber in the Brazilian Amazon. ⁵⁷

Although Bolivia had little choice but to cede control of the province, the two countries negotiated a compensation agreement that included the construction of a railway that would circumvent the rapids on the Río Madeira. The new railroad, which would be built in what is now the Brazilian state of Rondônia, would provide Bolivia with an expedited commercial route

^{*} The basis of Bolivia's claim dated from a series of treaties that divided the South American continent between the Spanish and Portuguese empires: Tordesillas (1494), Madrid (1757) and Ildefonso (1777). Although Bolivia inherited the territory upon independence, it agreed to cede the northern portion to Brazil in the Treaty of Ayacucho (1867) and the middle sector in the Treaty of Persépolis (1903) following its defeat in the Acre War. The southern sector, originally referred to as the *Delegación Nacional del Madre de Dios*, today constitutes the Department of Pando. Source: https://profilbaru.com/es/Tratado_de_Ayacucho

[†] The Bolivian government signed the Aramayo Contract with a newly constituted corporation referred to as the Bolivian Syndicate; among its senior executives were prominent Republicans linked to Theodore Roosevelt and William McKinsey. Source: Tambs 1966.

[‡] There were three jurisdictions known as the *República de Acre*. The first was proclaimed by a Spaniard, Luis Gálvez Rodríguez de Arias (1899–1900), the second by a Brazilian military renegade, José Plácido de Castro (1902) and the third by General Olimpio da Silveira operating under the direction of José Paranhos (Baron of Rio Branco), a Brazilian aristocrat who was foreign minister from 1902 to 1912. See Costa 2005.



The upper Rio Juruá was settled by seringueiros after about 1890; Cruzeiro do Sul was established in 1904 after Bolivia ceded Acre to Brazil in the Treaty of Persopolis. The town was connected to the Brazilian highway network in the late 1970s and has experienced steady growth due to the inflow of settlers who have established smallholdings in the surrounding upland landscapes.

Culture and Demographics Define the Present



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The Estrado de Ferro Madeira – Mamoré (EFMM) was built between 1907 and 1912 as part of Bolivia's compensation for ceding the Acre territory to Brazil. An engineering challenge made even more formidable by tropical diseases, the rail line was rendered unprofitable by the collapse of the Amazon rubber trade after 1920. The EFMM functioned as a subsidised state-operated company until 1972. Upper left: the rapids at Santo Antônio that rendered the Rio Madeira unnavigable; Upper right: the rail line under construction in 1908; Centre left: A span over a tributary of the Rio Madeira; Centre right: a loading area for rubber balls (bolachos); Lower left: the loading dock in Porto Velho; Lower right: the Candelaria cemetery where thousands of migrant workers were buried.

The Legacy of Migration



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The construction of the Estrado de Ferro Madeira — Mamoré (EFMM) was emblematic of the migratory phenomenon of the first rubber boom. Controlled by a US businessman (Percival Farquhar), the company contracted skilled and unskilled workers from across the world, including rural peasants from the Northeast of Brazil (upper left); civil engineers from the United States (upper right); physicians and nurses from the United States to combat yellow fever, malaria and cholera (centre left); women from Barbados to operate the laundry services (centre right); and Chinese (lower left), Haitian (lower middle) and Sikh from Southern Asia (lower right).

for its Amazonian territories. This was the era of railroad investment mania, and investors in London and New York poured capital into the scheme, a formidable engineering undertaking because of the region's remoteness and the threat of tropical diseases. A previous effort in the 1870s ended in litigation and bankruptcy. The Brazilian government made it a national priority, however, and it was built between 1907 and 1912.⁵⁸

The Estrada de Ferro Madeira-Mamoré (EFMM) was a massive project that employed between 2,000 to 3,000 men during the height of construction. It suffered enormous labour turnover, however, due to severe working conditions and endemic disease. By some estimates, as many as 30,000 men and women were employed over the life of the project, with a loss of life that exceeded 6,000 individuals. Many were foreigners who were ill-prepared for the tropical climate, but there was another infusion of Caboclos from Northeast Brazil. Ironically, the rail line was completed just as the Amazonian rubber industry collapsed because of competition from plantations in British Malaya.

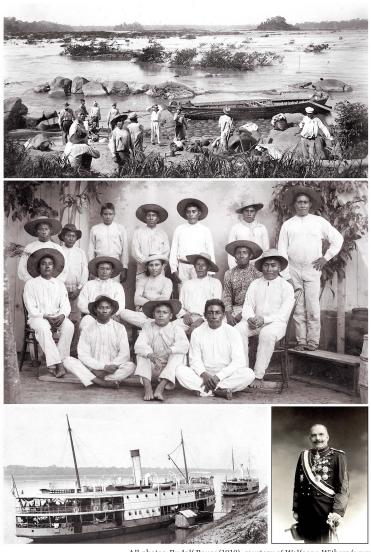
The first national census of Brazil in 1872 enumerated 323,000 residents in the states of Pará, up from around 85,000 after the *Cabanagem* massacres. This was before the onset of the rubber boom (~1890), when the influx of *Nordestinos* surpassed 20,000 per year. Between 300,000 and 500,000 eventually would migrate into the basin, radically transforming the demographic profile of the Brazilian Amazon. By 1910, the non-Indigenous population in Pará, Amazonas and Acre exceeded 1.2 million, while estimates of Indigenous people had fallen to below 100,000.

Bolivia

The Bolivian rubber boom was markedly different from its Brazilian counterpart because it was dominated by pioneers from Santa Cruz who had established cattle ranches in the Beni during the nineteenth century. These experienced frontiersmen were well positioned to occupy the forests along the Madre de Dios, Mamore and Iténez (Guaporé) rivers. The most successful of these entrepreneurs, Nicolás Suárez Callaú, established a trading post at Cachuela Esperanza near the junction of the Madre de Dios and Mamoré rivers, where rapids obligated traders to portage their merchandise through his installations.* Although nowhere near the size of Manaus or Iquitos, Cachuela Esperanza was the centre of the Bolivian rubber trade, with a radiotelegraph, cinema, state-of-the-art hospital, machine shops and, of course, warehouses to store rubber, which in Bolivia is called *goma*. Suárez also owned steamships, which he used to transport his merchandise and people both above and below the rapids that characterise this section of the Rio Madeira.⁶³

^{*} Other important Bolivian rubber barons were Antonio Vaca Díez (Río Orton) and Nicanor Salvatierra (Barraca San Pablo).

The Legacy of Migration



All photos: Rudolf Bauer (1910), courtesy of Wolfgang Withers (www.flickr.com)

The rubber trade in Bolivia was dominated by the Casa Suárez, which controlled access to the Madre de Dios and Mamoré rivers from its logistical center at Cachuela Esperanza (top). The Suárez brothers were allegedly less rapacious than their Peruvian and Brazilian counterparts because they relied on Indigenous labour governed by a pre-existing patron—peasant social system derived from the Jesuit missions of Chiquitos and Moxos (centre). The Suárez family operated a fleet of steamboats on the Rio Madeira (lower right) that allowed them to commercialise their rubber without the intermediation of Brazilian merchants. The family maintained an office in London that was managed by Pedro Suárez, who married a British aristocrat.



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Cachuela Esperanza was the logistical hub of the rubber baron Nicolas Suárez, who controlled most of the riverscapes of northern Bolivia. The site on the Río Madre de Dios was chosen as his headquarters because travelers were obligated to disembark and transport cargo around the rapids.

By 1912, the *Casa Suárez* controlled about sixty per cent of Bolivian rubber production and had opened offices in London and other cities. Including his family's cattle ranches in the Beni, the enterprise extended over 180,000 square kilometres. Suárez was also a patriotic Bolivian who financed a large portion of the country's armed forces in the Acre War. Self-interest no doubt drove his determination to protect his monopoly, but, without his intervention, Bolivia probably would have lost most of the present day Department of Pando.⁶⁴

Most of the *gomeros* employed by the *Casa Suárez* were internal migrants from the lowland provinces of Bolivia, including *Mestizos* from the city of Santa Cruz, but also native *Moxeños* and *Chiquitanos* drafted from the mission villages established in the previous century. ⁶⁵ Nicolás Suárez and his brothers used a form of debt slavery similar to the Brazilian system, but the *gomeros* were part of a subservient *patrón-peón* system that prevailed in the rural landscapes of Chiquitania and Beni. ⁶⁶ Since they were part of an established serf-like system, they were also more likely to be accompanied by women, which undoubtedly contributed to their reputation for docility.

Less acculturated natives also were recruited, particularly the Tacana, who were skilled forest guides capable of locating populations of rubber trees. Unsurprisingly, the incursion of outsiders accelerated the decline of Indigenous peoples, especially the Araona, who were estimated to have a population of more than 20,000 in 1900, but today number fewer than a

hundred.* The Tacana have fared better, although their cultural legacy was changed through intermarriage with migrant workers from the south. Their descendants pursue subsistence livelihoods, but many live in the towns of Riberalta, Rurrenabaque and Guayaramerím. Some work as wildcat miners on dredges exploiting placer gold deposits along the Beni and Madre de Dios rivers (see Chapter 5).

Peru and Colombia

The Jesuits and their successors were successful in keeping the Brazilian bandeirantes from encroaching into the Maynas province, but the onset of the rubber boom required more forceful action. In 1877, the Peruvian government sent three steamboats to establish a military base at Iquitos and reaffirmed that nation's control over Maynas, whose territorial sovereignty was disputed by both Ecuador and Colombia. The village evolved into a small city and became a major centre for the trade of caucho, the Peruvian term for natural rubber. Like Manaus, Iquitos boasted opulent hotels and luxury items imported directly from Europe, which catered to Peru's barones del caucho.

The production of *caucho* was based on the exploitation of *Castilla* species rather than *Hevea*; consequently, it was a much more destructive process, which developed a particularly cruel and exploitive slave-labour system. Because the whole tree was harvested, it produced a larger volume of rubber, which generated phenomenal revenue flows over the short term. The *caucheros* had no incentive to develop long-term rubber tapping stations. Rather, they sought out populations of *Castilla* that tended to occur in clumps of several hundred trees. Unsurprisingly, they would exterminate one local population and move on to the next.⁶⁷

The extractive nature of the system also influenced their need for labour. Instead of a docile peon who could be manipulated over years of drudgery, they relied on experienced woodsmen who could identify the *Castilla* groves and enslaved peons to fell trees and collect the latex. They would migrate with the former and conscript the latter from local Indigenous communities, typically by force, as they needed them. Historians have termed this terrorist slavery, because the *caucheros* were extraordinarily cruel and treated their peons as an expendable commodity that could be replaced as they expanded into new territories.⁶⁸

The most infamous of the Peruvian rubber barons was Julio César Arana del Águila, known as the *Rey del Caucho* because he organised a monopoly cartel extending from the Huallaga River to the Putumayo. Arana was ambitious, sophisticated and audacious, as exemplified by his decision to capitalise his enterprise on the London stock exchange as the 'Peruvian

^{*} Other Indigenous groups impacted by the Bolivian rubber boom include the Cavineño, Ese Ejja, Chácobo, Pacahuara and Yaminahua. Source: Assies 2002.

Culture and Demographics Define the Present



Hardenburg 1912



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The Indigenous people who avoided slavery suffered another round of disease and death. Top: A clan of so-called 'Free Indians of the Rio Ucayali,' probably Shipibo-Conibo (Hardenburg 1912). Bottom: A Karipuna family near Porto Velho interacting with the photographer contracted by the Estrada de Ferro Madeira-Mamoré; reportedly, between 60 and 70 individuals survived into the current decade (Angelo 2020).

Amazon Company'. Because travel to Iquitos from Lima could take weeks, Maynas was essentially an autonomous region, now known as Loreto, and the central government depended on Arana to project Peruvian sovereignty on frontier lands then disputed by Peru, Brazil, Colombia and Ecuador.⁶⁹

As in Brazil, the *Ribereña* population was unable to supply enough labour to meet the demand for rubber tappers. Arana initially imported labour from Brazil and the Caribbean, but soon elected to prey on the Indigenous nations of the Putumayo, particularly the Huitoto, Ocaina and Bora tribes, which were known for their peaceful (non-warlike) culture. His lieutenants were extraordinarily cruel and committed heinous crimes that today would be considered genocidal, including murder, kidnapping, rape, torture and enslavement. They were accused of exterminating entire villages during alcohol-driven bouts of sadistic entertainment.⁷⁰

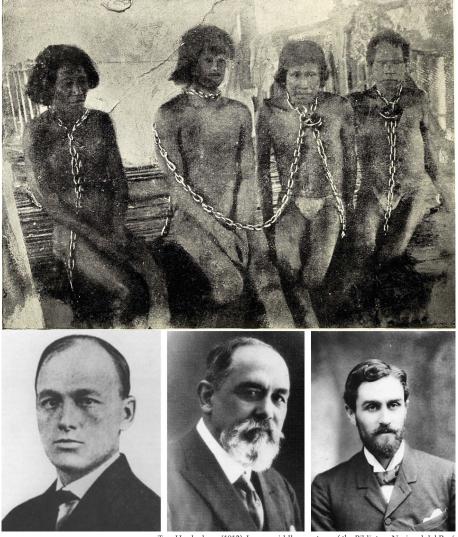
Their actions were eventually revealed by an American who had travelled to the Amazon in search of wealth and adventure. Walter Hardenburg fell prey to the machinations of the Peruvian Amazon Company, but managed to escape and publish an exposé in a progressive London newspaper. The resulting scandal motivated the British government to commission an enquiry under the direction of Roger Casement, a diplomat and civil rights advocate then serving as Consul General in Rio de Janeiro. His report, published in 1911, was corroborated by two Peruvian judges and a French journalist, which forced the House of Commons to investigate the atrocities. Julio César Arana testified in person and denied the allegations – or at least knowledge of the crimes. His employees avoided prosecution by disappearing, while Arana went on to represent Iquitos in the Peruvian Senate.

Like most rubber companies of the epoch, the Peruvian Amazon Company filed for bankruptcy, but during its two decades of operation it exported over 4,000 tons of rubber valued at about 1.5 million British pounds – an amount that, adjusted for inflation, would equal about US\$ 300 million in 2022. Although the Peruvian Amazon experienced an inflow of migrants, the Indigenous inhabitants on the Putumayo were devastated, falling from about 50,000 in 1890 to only 6,000 in 1920, when Colombia and Peru enumerated the inhabitants as they demarcated the boundary between their countries. 4

The other major *Rey del Caucho* was Carlos Fermín Fitzcarrald López, the son of an Irish immigrant who exploited *Castilla populations* on the Ucayali and the Madre de Dios rivers. He is famous because he built a railroad

^{*} Casement first became known for his 1904 report documenting abuses in the Belgian Congo, and he was knighted in 1911 for his work as a human rights advocate. An Irishman by birth, he was also an anti-colonialist and was executed by the British government for allegedly participating in the Easter Rebellion of 1916. Source: https://www.britannica.com/biography/Roger-Casement

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Top: Hardenburg (1912); Lower middle: courtesy of the Biblioteca Nacional del Perú

The cruelty inflicted on enslaved Indigenous (Huitoto) natives on the Río Putumayo was graphically exposed in 1909 (top) by Walter Hardenberg (lower left) in a British newspaper, igniting a public scandal because of the recent incorporation of the Peruvian Amazon Company on the London Stock Exchange by its principal shareholder, Julio César Arana (lower centre). The British government empaneled an investigative commission chaired by Roger Casement (lower right), an Anglo-Irish diplomat and human rights advocate, who was later executed by the UK government for treason for his role organising the Easter Rebellion of 1916. Arana went on to serve in the Peruvian Senate and died of old age in 1952.



Top left: Hardenburg (1912); Top centre: Roger Casement via Goodman (2010) (CC BY-SA 4.0); Top right: Roger Casement via Wikimedia.com (CC BY-SA 4.0); Bottom: Silvino Santos (1912) via Wikimedia.com (CC BY-SA 4.0)

Roger Casement, Walter Hardenburg and Peruvian journalists all documented the abuses committed by the agents of the Peruvian Amazon Company. Top: starving an elderly woman who reported the abuse to authorities (left); forced labour (centre); and the routine flogging of boys (right). Bottom: the enslavement of Indigenous girls as concubines by regional managers.

across an eleven-kilometre isthmus separating the two watersheds.* His goal was to create an export route from the Madre de Dios that avoided the interference of the Bolivians and Brazilians. He drowned at age 35, when one his steamboats capsized while trying to navigate rapids on the upper Urubamba River.⁷⁵

Fitzcarrald exploited indigenous labour by deploying detribalised Indigenous crews in wilderness areas in the upper Ucayali and Madre de Dios watersheds, where he would entice uncontacted Indigenous groups into clearings and capture them for his slave-fuelled enterprise. He enjoyed the collaboration of certain predatory Indigenous chiefs who would raid unsuspecting tribes; those that resisted were massacred. Fitzcarrald's actions eventually led to the division of the Piro ethnic nation into two tribes: those who were coerced into servitude are now known as the Yine, while those who retreated into the wilderness are the Mashco.⁷⁶

Fitzcarrald's death opened the Madre de Dios to a Spanish immigrant, Máximo Rodríguez Gonzales, who established a network that bordered, and blocked, the advance of the Bolivian rubber tappers employed by the Casa Suárez.† Simultaneously, the Peruvians and Brazilians adjudicated their boundary areas on the upper Purus River, largely to Brazil's benefit, because long stretches of the river had been occupied by *seringueiros* tapping the extensive *Hevea* groves that contributed to Acre's preeminence in the Amazonian rubber industry.⁷⁷

The Calm Before the Storm: The First Half of the Twentieth Century

The period between the end of the rubber boom and the onset of the colonisation frenzy that began in the 1960s was a time of relative stasis in the Amazon. The governments negotiated the final configuration of their international borders with a series of treaties that formalised the facts-on-the-ground that had been established during the rubber boom. Amazonian rubber production did not disappear, at least not in Brazil, where the government subsidised an industry that employed tens of thousands of individuals. Revenues fell from US\$ 2.8 billion in 1910 to less than US\$ 175 million by 1925,† while domestic consumption stabilised at between 15,000 and 20,000 tons per year (Figure 6.6).⁷⁸

^{*} A highly fictionalised version of this feat was the subject of a 1982 movie by Werner Herzog.

[†] In 1909, Bolivia recognised Peruvian sovereignty over some 250,000 square kilometres in the Madre de Dios and the Purus river basins, while Peru recognised Bolivian sovereignty over 91,726 square kilometres south of the Acre river.

[‡] This estimate is based on a table published by Santos (1980) that expresses the volumes and value of rubber exports between 1863 and 1920 in the value of the *Novo Cruziero* of 1971, then transformed into \$US dollars using the historical

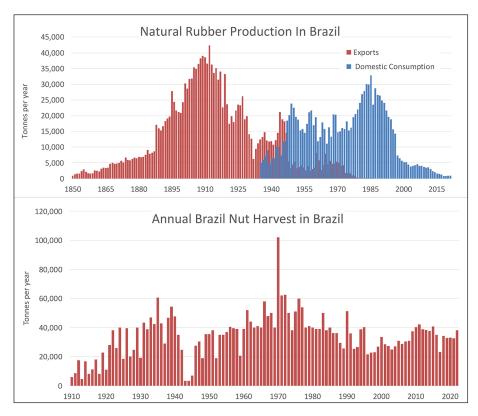


Figure 6.6: Natural rubber production reached a historic high in 1912, after which exports fell due to competition from Southeast Asia (upper graph). Production from the Brazilian Amazon continued because of subsidies and policies to support domestic supply chains. Exports rebounded during World War Two, but the federal government ended domestic subsidies in the 1980s, leading to a precipitous decline in forest rubber livelihoods. Seringueiros also collected Brazil nuts to augment their income, except during World War Two, when they dedicated their activities wholly to rubber production (lower graph).

Data sources: IBGE 1990, 2003, 2023b; Schrier 1940; Santana et al. 2017; CEDEB 1950.

Most of the migrants stayed and adapted to their new home. The collapse in the price of rubber coincided with an increase in demand for the *Castanha do Para*. Ye Known in international commerce as the Brazil nut, it became popular in the United States in the 1920s, when families included it as a treat in the traditional Christmas stocking. Although harvests could be quite variable (Figure 6.6), the duopoly provided *seringueiros* with a level

of economic security and probably avoided a mass exodus. Between 1910 and 1920, the population of Pará fell by only about ten per cent (50,000), but it increased by thirty per cent in Acre (18,000) and 1.5 per cent in Amazonas (5,000). The population stabilised at about 1.4 million in the five jurisdictions of the Northern Region until the next major geopolitical event that changed its future.

The Second Rubber Boom (1941–1945)

The survival of non-Indigenous forest communities enormously facilitated the rejuvenation of rubber supply chains at the onset of World War II, when the loss of British Malaya cut off access to rubber plantations. This created a grave risk for the United States and its allies, as rubber was essential for the manufacture of tens of millions of tyres for military vehicles and aeroplanes.* In 1941, Brazil was governed by Getúlio Vargas, an authoritarian who had adopted a position of neutrality while facilitating the sale of Amazonian rubber to Nazi Germany. The US entry into the war was preceded by a diplomatic campaign that led to the Washington Accords of 1942, which enlisted Brazil as an ally, committed the United States to defend Brazil† and guaranteed the provision of rubber, in part by subsidising the recruitment of rubber tappers and financing infrastructure, including both airfields and road networks.⁸¹

The Vargas administration established the *Serviço Especial de Mobilização de Trabalhadores para a Amazônia* (SEMTA), which blanketed the once again drought-stricken Northeast with recruiting stations to enlist 'rubber soldiers' (*soldados da borracha*). Originally conceived as a scheme to recruit young adult males, it soon included whole families, because authorities realized a family-based policy would give it stability and permanence. It was a chaotic process fuelled by cash advances, haphazard logistics and accusations of fraud. Eventually, 55,000 *Nordestinos* would be transported into the Amazon. Desertion was common, as recruits dropped out in Manaus and Belem to pursue other opportunities. Some ten per cent reportedly succumbed to malaria and other diseases.⁸²

Many of the new migrants were sent to Acre and adjacent areas of Amazonas and Rondônia, which continued to be the largest source of rubber within Brazil. The long economic recession had loosened the power of the *seringalistas*, who now treated their *seringueiros* not as contract employees tethered by debt, but as leaseholders who could elect to obtain supplies from itinerant merchants via a modified system of *aviamento*. The increased

^{*} The war accelerated the development of synthetic rubber, but natural rubber was still essential, because mixtures have greater flexibility and strength. Source: https://www.gmtrubber.com/natural-vs-synthetic-rubber/

[†] Before the agreement, there was concern that the German military would invade Northeastern Brazil, because the coast was poorly defended and relatively close to North Africa.

The Legacy of Migration



Courtesy of the Museu de Artes da Universidade Federal do Ceará



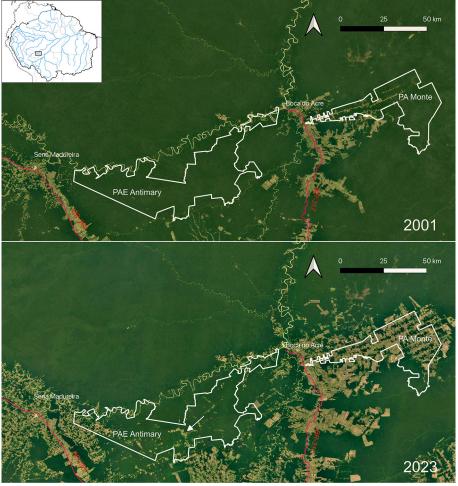
CC BY 4.0 via ResearchGate



Courtesy of US National Archives

World War Two catalysed a second Amazonian rubber boom when the US enlisted the Brazilian government as an ally. Together the two countries mobilised a war-time supply chain that recruited 60,000 rural workers to repopulate the seringales of Brazil. Besides breathing life into the EFMM, the US Army Air Corps introduced Catalina PBY amphibian airplanes to transport raw rubber from remote logistical centres to Belém, where it was shipped to tyre factories in the USA.

Culture and Demographics Define the Present



Source: Google Earth and RAISG

Boca de Acre played a key role during the Acre conflict (1895–1905) and was a stronghold of rubber workers (seringueiros) in the 1980s, when they were organising under the leadership of Chico Mendez. The PAE Antimary, created in 1987, was one of the first agro-extractive reserves in Brazil; since ~2010, it has been progressively invaded by land speculators and cattle ranchers (Marques Silva 2023). One of these ranches (see arrow) was subject to legal action brought by public prosecutors targeting illegal deforestation and land speculation. The PA Montes was created in 1992 and was the last INCRA-sponsored agrarian settlement in the state of Amazonas.

freedom led to the organisation of forest communities, referred to as *colocações*, which functioned as a type of informal communal enterprise. This cultural milieu eventually coalesced into the social movement (*Sindical dos Trabalhadores Rurais no Acre*) led by Francisco Alves Mendes Filho (Chico Mendes) and Marina da Silva, both of whom were children of *Nordestinos* raised in *colocações*. The concept of communal territories, pioneered by the *seringueiros* of Acre, was eventually formalised and expanded into an Amazon-wide system of extractive reserves in both the protected area system (ICMBio) and the agrarian reform agency (INCRA).

The second rubber boom, which also included Bolivia, was short-lived and, as soon as the war was over, the American soldiers left, abandoning millions of dollars' worth of equipment and supplies to local entrepreneurs who knew nobody was coming back to claim ownership. More importantly, the war highlighted the strategic value of the Amazon and motivated President Vargas to create two new federal territories: Guaporé, now Rondônia, and Rio Branco, now Roraima. He also founded two institutions that would finance the transformation of the Amazon in the last half of the twentieth century: the *Banco de Crédito da Borracha* (now the Banco da Amazônia – BASA) and the *Superintendência do Plano de Valorização Econômica da Amazônia* (now the *Superintendência do Desenvolvimento da Amazônia* – SUDAM).

Mato Grosso and Rondônia

The rubber boom extended into Mato Grosso via the Rio Tapajós and its dismembered territory of Rondônia, which was greatly impacted by the decision to build the Madeira-Mamoré Railroad. The region's strategic importance motivated the government to extend a telegraph line from Cuiabá to Porto Velho, which was built simultaneously with the railroad and commissioned in 1915. The line was one of several constructed by the *Comissão de Linhas Telegráficas Estratégicas do Mato Grosso ao Amazonas*, and although it was nothing more than a mule trail through the forest, it created a land route into the heart of the Amazon that would later become BR-364 (Figure 6.7).

The region's isolation did not end until the 1930s, when road connections linked Cuiabá to São Paulo, and the onset of commercial aviation in the 1940s, a consequence of the proliferation of air services during and after the war. The expansionist development policy was further advanced when Getúlio Vargas created the *Fundação Brasil Central* (FBC), which financed the exploration of northern Mato Grosso using a combination of

^{*} Other key leaders were Wilson de Souza Pinheiro, who was murdered in 1981, and Dercy Teles de Carvalho, the first female president of the Sindical dos Trabalhadores Rurais no Acre.

[†] Reservas Extrativas (RESEX), Reserva de Desenvolvimento Sustentável (RDS), Projetos de Assentamento Agroextrativista (PAE); see Chapter 4.

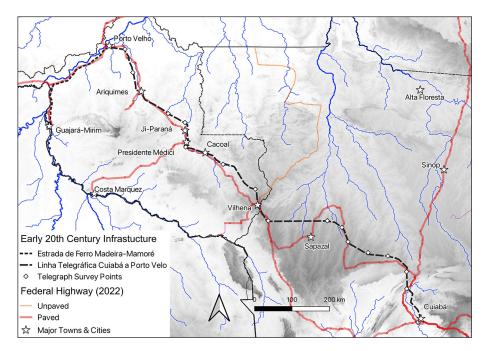


Figure 6.7: The telegraph line connecting Cuiabá with Porto Velho was constructed between 1912 and 1915 by Cândido Rondon and, coincidentally, created the first terrestrial connection between Southern Brazil and the Amazon. The trail would be improved in the 1970s as part of the build-out of the highway system that facilitated settlement of the state that now bears Rondon's name.

Data source: Machado Domingues 2010.

trails cut by veteran woodsmen and light aircraft that would resupply the cutting crews and conduct aerial mapping. By fortuitous happenstance, the *Expedição Roncador-Xingu*, was led by a trio of charismatic brothers who were disciples of Rondon, and who convinced the government to create the nation's first large-scale Indigenous reserve, the *Parque Indígena de Xingu* (see Chapter 11).

Mato Grosso's agricultural economy consisted almost entirely of the cattle industry, which grew progressively through the export of live animals and the production of dried meat and hides. In contrast, mining grew exponentially in northern Rondônia, with the discovery of cassiterite deposits near Porto Velho and adjacent municipalities. Wildcat gold mining occurred throughout this period, particularly along the Rio Madeira, which had been identified as a placer gold deposit of global importance during the late 1890s.



Acervo do Indio/FUNAI

Cândido Mariano Rondon was a military officer who led various expeditions to extend telegraph lines from South Central Brazil to border towns of Mato Grosso, particularly Corumbá (MS) and Porto Velho (RO). His exploits made him a national hero, and he was granted the rank of Marichal del Exerito on his 90th birthday in 1955. His success as a sertanista (backwoodsman) rested in his ability to empathise and communicate with Indigenous groups, a legacy he inherited from his mother, who was a member of both the Tereno and Bororo ethnic groups. Rondon founded the Serviço para Proteção de Índio (SPI), the precursor of the Fundação Nacional do Índio (FUNAI), which oversees the state's relations with Brazil's Indigenous people.

The European Colonisation of the Selva Alta in Peru

Unlike Brazil, Peru's rubber boom did not enjoy an extended period of low-level productivity, as neither the extractive system nor the dependence on coerced Indigenous labour was sustainable. After the rubber economy collapsed, Indigenous communities regrouped as best as they could, but most detribalised individuals joined *ribereña* communities and returned to subsistence livelihoods on the Ucayali, Marañón and Amazon rivers. Colonisation by external migrants was underway, but mostly limited to the *Selva Alta*, the Peruvian term for the montane forests of the Eastern Andes.

Successive Peruvian governments started promoting immigration from Europe in the last half of the nineteenth century, partly because of xenophobic fears triggered by the influx of indentured servants from China between 1850 and 1875. European migrants settled in villages and towns

across the country, but a particularly ambitious project was organised by Baron Damian Schutz von Holzhausen. The baron had obtained a land concession near Pozuzo (Pasco), where around 500 German and Austrian immigrants settled between 1859 and 1868. Their presence and relative success attracted hundreds of additional settlers of Germanic descent to the humid tropical valleys near Oxapampa (Pasco), Perené and Satipo (Junin).⁸⁴ These European settlers established Peru's first coffee production landscapes in an area now referred to as the *Selva Central*.

Their activities led the government to include the region in a financial operation to restructure its foreign debt in the aftermath of the War of the Pacific.* In 1890, the government reached an agreement with The Peruvian Corporation Ltd., a holding company recently incorporated on the London Stock Exchange that was capitalised by equity issued in exchange for sovereign bonds issued in the 1870s during the War of the Pacific.⁸⁵ The goal was to convert the bad debt into a business enterprise that would generate revenue from productive activities that would benefit the Peruvian economy. As part of the debt swap, one of the first in modern history, Peru granted the company mineral concessions and the right to export guano, while ceding infrastructure assets (including both rail and ports) and title to public land.

The Peruvian Corporation took legal possession of 500,000 hectares near the village of Perené, dispossessing the Asháninka people of their territorial rights. ⁸⁶ Over the next several decades, the company and its managers promoted the cultivation of coffee as an export crop. Originally, the managers of The Peruvian Corporation attempted to entice or coerce the native population into cultivating coffee, but the unwillingness of forest dwellers to adopt a peon-like existence eventually motivated the company's managers to contract workers from adjacent areas of the Andean highlands. Part of their business strategy was to sell land-holdings to third parties, which stimulated additional non-native migration into the *Selva Central* and created Peru's first deforestation frontier. Over time, the colonisation front expanded north into the piedmont landscape near Pucallpa, which became connected to Lima in the 1960s by a trunk highway.

Another colonisation vector targeted the Gran Pajonal, an apparently natural grassland located midway along an ancient road between the coffee plantations near Satipo and the village of Atalaya on the Ucayali River. The

^{*} Chile decisively defeated the Peruvian and Bolivian alliance, which led to a rearrangement of international borders, with Bolivia losing access to the sea, while Peru ceded its southern provinces to Chile.

[†] The Peruvian Corporation was controlled by William and Michael Grace, who used their Peruvian assets and revenues to create W.R. Grace & Co., a US-based industrial and shipping conglomerate; its Peruvian assets were nationalised in 1974 and the corporate parent (now Grace Lines) was acquired by the Standard Industries in 2021. Source: Grace: https://grace.com/

grassland and its surrounding forest had long been occupied by an Ashininka community that had been harassed and weakened by slave traders during the rubber boom. Franciscan missionaries arrived in the 1920s in an effort to evangelise the Indigenous residents, but they also opened the



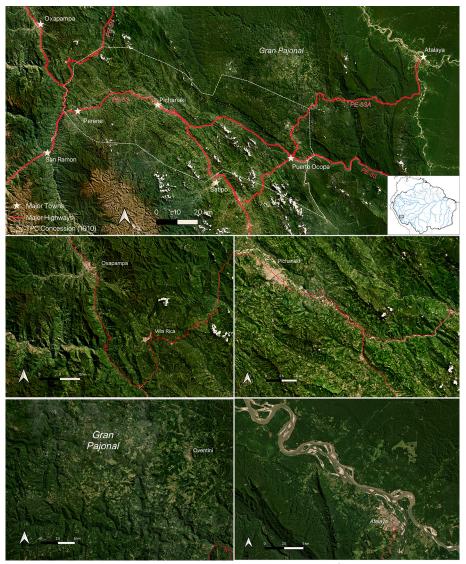
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Santa Rosa de Oxapampa was built in 1936 by descendants of German settlers who migrated to the region starting in the 1860s to establish what is now Peru's premier coffee production region and centre of ecotourism.

Culture and Demographics Define the Present



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The valley of the Río Perené was opened to settlement by The Peruvian Corporation Ltd., which was incorporated on the London Stock Exchange in 1890 after negotiating a 500,000-hectare land grant as part of a debt swap with the Peruvian state (see text). Many of the valley's Ashaninka Indigenous inhabitants were displaced by colonists in the subsequent decades, including in the Gran Pajonal, a plateau with an unusual mosaic of forest and grassland that predates the twentieth century phenomenon of deforestation. Despite decades of land-use change driven by the region's coffee industry, the area retains significant forest remnants rich in biodiversity.

Gran Pajonal to migrants from the Andean highlands. Referred to as *Colonos*, the newcomers were Quechua-speaking families with a tradition of animal husbandry who were attracted to the region's lush tropical grasslands. As enterprising small farmers, however, they also began to establish coffee plantations.⁸⁷

The growing population of *Colonos* led to conflict with the resident Ashininka and eventually to a military intervention to restore peace amongst feuding Indigenous communities. This cultural conflict presaged events in the 1960s, when Marxist guerillas unsuccessfully attempted to organise a peasant revolution, and again in the 1980s, when terrorists used the Gran Pajonal as a staging area.* Resistance by the Ashininka, first to the invasion of their lands by *Colonos* and later to the abuses of *Sendero Luminosa*, catalysed the organization of a self-defence force that evolved into one of the Peru's first Indigenous organisations.⁸⁸

Further north, the natural resources of the lower Huallaga and Mayo rivers led to the development of commercial agriculture in the newly constituted Department of San Martín, particularly around its two major towns, Moyobamba and Tarapoto, key logistical centres that provided services to the province of Maynas (now Loreto). An influx of European settlers in the nineteenth century catalysed the region's agricultural development. Attracted by the valley's alluvial soils and abundant water, the region's creole elite developed an irrigation agriculture economy based on cash crops (rice, maize, cotton, sugar cane and tobacco). By the mid-twentieth century, the valley's strategic position and relative wealth ensured it would play a major role in the next phase of development in the Peruvian Amazon. Services

The Colonisation of Caquetá

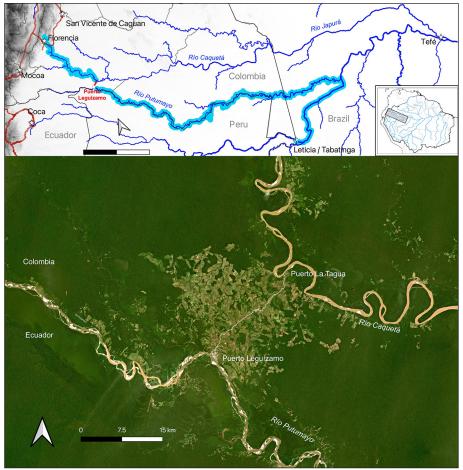
The border conflicts between Colombia and its neighbours were resolved in a series of treaties that were negotiated and ratified in the first decades of the twentieth century (see <u>Annex 6.1</u>). The absence of geopolitical insecurity *vis-a-vis* its neighbours, however, did not mean that Colombia could forgo the requirement to establish transportation links between its population centres in the Andes and its scattered military outposts in the Amazon. Leticia is essentially a Colombian island in the middle of the Amazon, and the central government built a highway between Guadalupe (Huila) and Florencia (Caquetá) in the 1930s to create a transportation artery between its population centres and the military and commercial outpost at Leticia on the Amazon River. The route depended on fluvial transport along the

^{*} In the 1960s, the militias belonged to the *Movimiento de Izquierda Revolucionaria* (MIR), while in the 1980s they were part of *Sendero Luminoso*.

[†] Moyobamba is notable for its diverse European heritage; 70% of the population is allegedly descended from immigrants from Armenia, Syria and Germany. Source: Salinas 2010.

Río Caquetá to Puerto Tagua, which connected, via a twenty-kilometre isthmus, to Puerto Leguízamo on the Río Putumayo, providing a shorter fluvial route to Leticia via the Rio Solimões. This roundabout connection explains why most transport occurs by air or by ocean-going transport on the Amazon River.

Although seldom used for commerce, the highway did open the piedmont to settlement, including by campesinos seeking to escape the economic



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The Caquetá–Putumayo hidrovía is Colombia's only direct connection to the Amazonian city of Leticia; key to that transportation system is the isthmus between Puerto Leguízamo and Puerto La Tagua. Aerial transport is now used for all but the heaviest cargo.

domination of landlords who controlled access to land in the highlands. The region also attracted the attention of certain affluent families who began cattle ranching, including a prominent politician from Huila whose family went on to establish the country's largest landholding. The flow of migrants increased during the *Violencia*, a civil war between 1948 and 1958 that was a precursor to the conflict with Marxists guerillas that started in the 1960s. Farms and ranches expanded along a road that paralleled the front range of the Andes, from San Vicente de Caguán in the north to Valparaíso in the south. Settlement was spontaneous and occurred with little or no support from the national government, but it created a process and culture that was recognised by the government in the late 1960s when it approached the World Bank to request funds for its first large-scale colonisation project in the Amazon. ⁹¹

Mass Migration in the Last Half of the Twentieth Century

The most recent, largest and probably last migratory wave into the Amazon started in the 1960s with the initiation of infrastructure projects and land distribution programmes in Brazil, Bolivia, Colombia, Peru and Ecuador. Each country had its version of these policies, but the objective was clear in the universal adoption of the term 'colonisation', the names of key institutions and the self-identification of its participants as 'Colonos'. Like previous epochs, the policies and events had strong regional variations that reflected the origin of the immigrants and the cultural traditions they brought with them into the Amazon.

Brazil

Policy initiatives to develop the Amazon were organised and financed by multiple agencies, reflecting an 'all of government' approach of the military government that ruled Brazil from 1964 to 1985. It was a logical extension of policies initiated by previous civilian governments, most notably the *Marcha para o Oeste* and the decision to relocate the federal capital to Brasília.

In 1966, the military government launched *Operação Amazônia*, which was summarised by the slogan: 'Bring people without land to a land without people.' Integral to this policy of migration and settlement was the intention to physically occupy the landscapes bordering neighbouring countries.⁹² Special incentives included land grants, exemption from federal income and excise taxes, and a progressive land tax that encouraged the conversion of

^{*} Oliverio Lara Borrero was the governor of Huila and president of the *Asociación Nacional de Ganaderos* (now FEDEGAN). He was kidnapped and assassinated by the *Fuerzas Armadas Revolucionarias de Colombia* (FARC) in 1965; his ranch, Laralandia, covered 50,000 hectares at the time of his death. Source: https://www.contextoganadero.com/ganaderia-sostenible/este-era-el-pensamiento-de-oliverio-lara-hace-54-anos-antes-de-su-asesinato

Culture and Demographics Define the Present



Top left: Arquivo da Presidência da República (CC0); Top right, centre left and right: Public Domain via Wikimedia; Bottom left: CC BY-SA 3.0 NL via Wikimedia; Bottom right: Romanian National Archive 'Fototeca online a comunismului românesc' Cota 36/1973 Fotografia #AA149.

Military strongmen in the 1970s implemented policies to colonise and exploit the mineral resources of their Amazonian regions. Brazil: Emílio Médici (top left), Ernesto Geisel (top right) and João Figueiredo (centre left); Bolivia: Hugo Banzer (centre right); Peru: Juan Alvarez Velasco (bottom left); Ecuador: Guillermo Rodríguez (bottom right).

forest to crop land or pasture. 93 The initiative also established the concept of the 'Legal Amazon', which designated which states of the federal union were eligible for the fiscal incentives. 94

In 1972, the federal government launched another programme known by its acronym POLAMAZÔNIA,* which designated fifteen landscapes, referred to as development poles, as priority areas for the expansion of mineral, livestock and agro-industrial production (Figure 6.8). Development was organised by the *Programa de Integração Nacional (PIN)*, which was predicated on the construction of major trunk highways and the distribution of land along the margins of those highways. The initiative was managed by the *Instituto Nacional de Reforma Agraria e Colonização* (INCRA), which began by distributing 100-hectare plots via *Projetos Integrados de Colonização* (PIC). Tens of thousands of landless peasants began migrating into the Amazon. Unfortunately, INCRA had neither the financial resources nor the technical capacity to support such an ambitious programme and was soon beset with a host of logistical problems and a flood of complaints from angry citizens (see Chapter 4).

In response, in 1981 the government and the World Bank launched the POLONOROESTE† project, which was intended to be a model for an integrated approach to frontier development. It included infrastructure development, agricultural extension, land title administration and health care. The project triggered another land rush and led to the development of one of Brazil's most dynamic smallholder landscapes. Despite its emphasis on providing landless peasants a pathway out of poverty, POLONOROESTE was soon the focus of intense criticism for unleashing deforestation and causing harm to Indigenous communities.

The World Bank sought to remedy the deficiencies in the original project by funding a follow-on project, known as PLANOFLORO,[‡] which explicitly committed to a participatory framework and the demarcation of Indigenous lands and protected areas, as well as systems for rural credit, improved educational programmes and support for public institutions.⁹⁵

Despite the remedial investment focusing on sustainability, the highway and settlement process undertaken via POLAMAZÔNIA and POLONOROESTE are widely viewed as failures of the development strategies of the 1970s. For example, the *Transamazônica* has never functioned as a transportation corridor, while the colonisation landscapes in both Acre and Roraima remain backwaters. Nevertheless, political leaders in these regions are determined that some type of conventional productive activity will eventually become established.

^{*} Programa de Polos Agropecuários e Agrominerais da Amazônia – POLAMAZÔNIA.

[†] Programa Integrado de Desenvolvimento do Noroeste do Brasil – POLONOROESTE.

Flano Agropecuário e Florestal de Rondônia – PLANOFLORO.

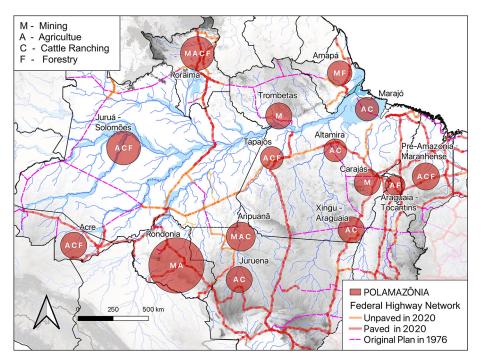


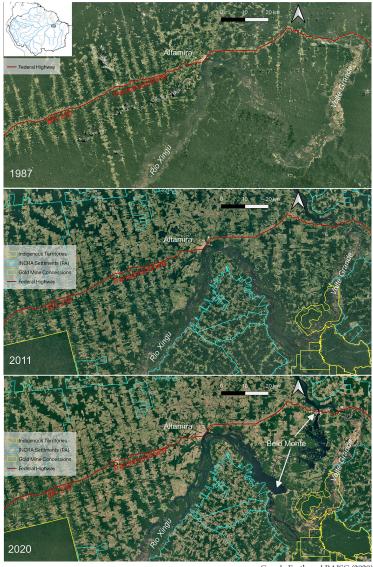
Figure 6.8: The original development poles designated by the Brazilian government in the POLAMAZÔNIA initiative of 1972.

Data source: De Mello 2006.

Investment in infrastructure lagged between 1985 and 1995 because of economic problems that plagued the country during a period of high inflation, but increased after fiscal reforms in 1997. Once again, development initiatives became major components of a series of administrations, although they have been subsumed into other initiatives marketed to reflect the political agendas of successive elected governments. The new investment phase began with the administration of Fernando Henrique Cardoza: *Brasil em Ação* (1996–1999) and *Avança Brasil* (2000–2003), which were followed by even larger initiatives by Inácio Lula da Silva: *Plano Brasil de Todos* (2004–2007) and *Programa de Aceleração do Crescimento – PAC 1* (2007–2010), and Dilma Rousseff: *PAC 2* (2011–2014).⁹⁷

Infrastructure investment was scaled back after 2015, partly because of a dramatic decline in revenues due to the collapse of international commodity markets, but also because the appropriation process had been poisoned by the *Lava Jato* corruption scandal, which revealed that vast sums of the money had been wasted, stolen or pilfered (see below).

The Legacy of Migration



Google Earth and RAISG (2020)

Altamira was one of twelve development poles created by the POLAMAZÔNIA programme in the late 1970s. The construction of the Rodovia Transamazônica (BR-230) stimulated migration and deforestation as thousands of smallholders received land that was distributed via Projetos de Colonização (PIC). In the 1990s, policy reforms sought to organise settlements via INCRA-sponsored Projetos de Assentamentos (PA) and to recognise Indigenous Territories. The Belo Monte hydropower complex was built between 2015 and 2019, while mining projects, such as the Belo Sun gold mine, are undergoing an extended (and conflictive) environmental review (see Chapter 5).

Migratory Pathways

There have been three major sources of Brazilian immigrants in the twentieth century: the Northeast, where emigration offers one of the few realistic opportunities to escape poverty; the South, where middle-class families embraced an opportunity to continue a farming tradition; and the Central West, where immigrants have flowed northward as part of an organic expansion of the agricultural frontier. Internal migration within the Amazon responds to gold rushes and land grabs when roads are about to be improved, as well as job opportunities at large-scale infrastructure projects, such as industrial mines and hydropower plants. The most persistent trend is the flow of people from rural to urban communities. Immigrants have included entrepreneurs, professionals and cattle ranchers, but a much larger cohort has consisted of impoverished or marginalized families seeking economic opportunity.

Migration was first stimulated by the construction of the *Rodovia Belem-Brasília*.† Built between 1958 and 1960, this transportation corridor linked the new capital with the largest city in the Amazon and triggered the first land rush into the Legal Amazon. During this period, the state governments of Pará and Goiás‡ commercialised millions of hectares of land to promote colonisation and settlement by affluent and middle-class families. An even larger migratory flow occurred in the 1970s, however, when large-scale highway building led to the construction of the *Rodovia Transamazônica* (BR-175), the railway to the Carajás mining district (EF-315), and the trunk highway connecting the municipalities of Eastern Pará (BR-158). In the 2010 census, 725,000 residents of Pará listed their origin as one the states in Brazil's Northeast region.

Most of the new immigrants were *Nordestinos* responding to opportunities and programmes being advanced by the *Instituto Nacional de Colonização e Reforma Agrária* (INCRA), the newly created federal agency distributing land parcels of between forty and a hundred hectares as part of an integrated highway construction and colonisation programme (*Plano de Integração Nacional*). Like the *Nordestinos* of the rubber boom, they were fleeing poverty and pursuing freedom, or at least personal autonomy, by

^{*} Brazilian economists stratify Brazil into five macro-regions: the North (Acre, Amazonas, Amapá, Rondônia, Roriama and Toconatins); the Center West (Goiás, Mato Grosso and Mato Grosso do Sul), the South East (Espiritu Santo, Minas Gerais, Rio de Janiero and São Paolo) and the South (Paraná, Rio Grande do Sul and Santa Catarina).

t Sometimes referred to as the *Rodovia Transbrasiliana*, it includes sections of several highway units designated as BR-010, BR-153, BR-226, BR-316 and BR-308; see Chapter 2.

[‡] Tocantins was separated from Goiás and organised as a new state in 1988.

escaping their previous existence as share croppers bound by unfair contractual relationships. $^{\rm 98}$

Most failed to obtain an allotment in a government-organised settlement and would simply occupy a plot of public land, thus becoming *posseiros* (rather than *proprietários*), a tenure status that provides certain legal rights that improve over time (see Chapter 4). Unfortunately, without access to credit or extension support, many were unable to make a living and had little choice but to become rural workers employed by middle-class and corporate ranchers who were simultaneously responding to the military government's call to colonise the Amazon.

By 1975, it had become evident that inadequate extension, poor infrastructure and the lack of basic services were creating a chaotic situation on the small farm landscapes of the forest frontier. Consequently, the military government modified its development strategy to favour land transactions creating large-scale ranches. *Nordestinos* continued to move into these landscapes, however, which led to conflict, often violent, between large landowners with political influence and smallholder communities supported by the Catholic Church and civil society.⁹⁹

A less conflictive process occurred on landscapes adjacent to long-established river ports on the north bank of the Amazon River (Prainha, Monte Alegre, Alencar, Óbidos, Oriximiná), where *Nordestino* immigrants and resident *Ribeirinhos* established small farms to cultivate basic food crops, particularly manioc (cassava). Over time, these producers would expand their spatial footprint and diversify into cattle production.

Fluvial transport also facilitated the arrival of a new wave of *Nordestinos* to northeast Rondônia in the 1960s. Many were attracted by the boom in cassiterite (tin) mining, but the government had also improved Rondon's mule trail between Cuiabá and Porto Velho, which would eventually evolve into BR-364. These events set the stage for a colonisation boom in the 1970s with the initiation of four INCRA-sponsored colonisation projects along the rustic frontier highway. This inflow turned into a massive land rush in the 1980s, when the POLONOROESTE project created nineteen additional colonisation centres in a renewed attempt to create a migratory alternative for the rural poor.

The population of Rondônia surged from 100,000 in 1972 to more than 400,000 in 1982, when its status was elevated from a federal territory to a state of the union. ¹⁰⁰ By 1990, it had a population of more than a million, most of whom were small farmers, including both *Nordestinos* and recent immigrants from Paraná, who had transformed wilderness into a vast agricultural landscape. This transition was neither conflict free nor particularly well planned, despite technical assistance from two high-profile projects financed by the World Bank. In spite of the setbacks, Rondônia is now home to one of Brazil's most egalitarian farm economies.

Acre preceded Rondônia in elevation to statehood by almost twenty years, during which time its citizens pursued livelihoods based on rubber tapping and Brazil nut gathering. This changed dramatically, however, following the extension of BR-364 into Acre and the installation of a half-dozen INCRA-sponsored agrarian settlements. The population expanded from 111,000 in 1970 to 300,000 in 1980 and to more than 490,000 by 1990.

Most of the immigrant families created small- to medium-scale cattle farms that led inevitably to conflict with the *seringueiros* who were struggling to maintain their forest-based livelihoods in an economic and political environment that was undermining their existence. The military government was in the process of ending rubber subsidies and was actively promoting the expansion of the cattle industry to increase settlement in the region. This coincided with the self-organisation of the rubber workers into syndicates, which originally were created to improve their bargaining position with *seringalistas*, but which became essential in their struggle to protect their rubber concessions from land grabbers representing medium to large-scale cattle ranch owners.

The movement was led by Chico Mendes,* who pioneered a tactic known as *empate*, a standoff in which a group of *seringueiros* would confront a team of forest-clearing contractors. This was a dangerous gambit in a pioneer landscape where the rule of law was either nonexistent or perverted by officials seeking to benefit from the government's policies to advance the agricultural frontier. Coincidentally, deforestation was a newly important theme within civil society organisations and had become an international issue, in part because of Chico Mendes' charismatic leadership and his ability to communicate his community's situation to a global audience. Among his accomplishments was his advocacy for the creation of extractive reserves as a land tenure solution that would guarantee the rights of forest communities and promote forest conservation.

In 1987, the Environmental Defense Fund and the National Wildlife Federation invited Mendes to attend the annual conference of the Inter-American Development Bank (IDB) in Washington, D.C., where he spoke to members of Congress about an IDB-funded road project in Acre that threatened the rainforest and its inhabitants. Both the IDB and the World Bank subsequently endorsed the idea of establishing extractive reserves. Ceding to international pressure, the Brazilian government created the first extractive reserve in 1988. Unfortunately, his international prestige did not

^{*} Francisco Alves Mendes Filho led or participated in the creation of several labour organisations, the *Sindicato dos Trabalhadores Rurais de Brasiléia* (1975) and the *Sindicato dos Trabalhadores Rurais de Xapuri* (1978), as well as the *Conselho Nacional dos Seringueiros* (1985) and the current governing party, the *Partido de Trabalhadores* (1980)

protect Chico Mendes from the wrath of the cattle ranchers who continued to invade and clear the forests around his hometown of Xapuri. He was assassinated in his front yard by a hired killer in 1988.

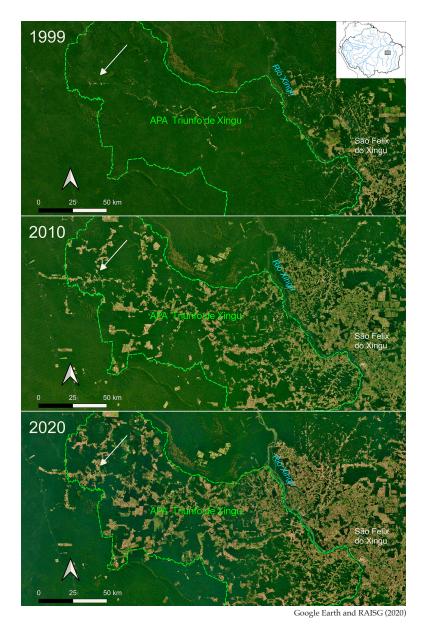
Another major vector for migration into the Amazon is the highway that traverses southeastern Pará (BR-150 and BR-158), where most ranching families immigrated from Goiás, which had been settled in the 1950s and 1960s. Goiás is dominated by the beef industry, and its popular culture is infused with a pioneer spirit associated with cowboys and cattle ranching. This group's influence can be seen in the composition of the settler communities in São Felix do Xingu, which was established in 1910 during the first rubber boom. The municipality was transformed in the 1980s by the *Projeto de Colonização Tucumã*, a private settlement venture implemented by a construction company (Andrade Gutierrez), which included a commitment to build a regional highway, PA-279, to connect São Felix with BR-150 at Xinguara.

The colonisation project was overwhelmed by settlers and wildcat gold miners, causing Andrade Gutierrez to abandon its commitment to develop a series of *agrovilas* and, instead, reverted the land distribution process to INCRA, which was likewise powerless (or disinclined) to stop the appropriation of public lands. Although the population of São Felix do Xingu is not unlike that of other municipalities in eastern Pará, the migrants from Goiás were particularly skilled in the dark arts of land grabbing, known as *grilagem* (see Chapter 4). Approximately forty per cent of all landholders in the municipality originate from Goiás, followed by immigrants from Mato Grosso, Minas Gerais and Tocantins. 101

The history of immigration into Mato Grosso is also unique. Between 1981 and 1991, the state received about 500,000 migrants in a demographic phenomenon radically different from those of Pará, Acre and Rondônia. Almost half of the new arrivals were from the South, and a majority were of European descent. They came as intact families seeking to continue a tradition of family farming and were attracted to the state because it was increasingly difficult to acquire arable land in their home villages in Paraná, Santa Catarina and Rio Grande do Sul. They were attracted to frontier landscapes in the northern part of the state, where settlements were being organised by private companies or cooperatives acting as intermediaries for both large- and small-scale farmers.

Several of these schemes reflected the influence peddling that characterised the federal and state governments in the 1960s and 1970s. In the most notorious transaction, two million hectares were sold to four companies for US\$4 per hectare. There were dozens of these land companies, and

^{*} Integração, Desenvolvimento e Colonização – INDECO, (Sr. Ariosto da Riva) @ 400,000 ha, 1975; municipalities of Alta Floresta, Apiacás and Paranaíta. Juruena Emprendimentos e Colonização Ltd – JURUENA (João Carlos Meirelles) @ 200,000



São Felix do Xingu was an isolated village established during the first rubber boom at the end of the nineteenth century. It became a destination for rural migrants and the east bank of the Rio Xingu was largely settled by smallholders in the 1980s. Cattle ranchers invaded the west bank of the Rio Xingu in the 2000s and eventually overwhelmed efforts to control deforestation in the Área de Proteção Ambiental (APA) Triunfo do Xingu, a multiple-use conservation reserve created in 2006. The arrow points to a cassiterite mine established in the early 1980s that opened the west bank for development.

The Legacy of Migration



Google Earth (2023)

The landscapes north of Aripuanã were targeted by the POLAMAZÔNIA settlement program in the 1970s, when authorities allocated land to companies and credit cooperatives that sold 100-hectare parcels to individual families (e.g. Cotriguaçu, Colniza, Comselva). Approximately half the remnant forest is held by large-scale landholders pursuing timber extraction as a business model, while the remainder is conserved within Indigenous Territories, such as the TI Pripkura, which is inhabited by two middle-aged men living in voluntary isolation (Wenzel 2021).

their history is memorialised in the unusual names of these municipalities, derived from the name or acronym of the land company: Sinop, Colíder, Cotriguaçu and Colniza.*

Southern migrants enjoyed several cultural advantages. They had social and family connections to influential individuals and institutions that opened doors and created opportunities denied to the landless peasants who settled in Pará. They also arrived together, with a preconceived spirit of community, since many hailed from the same municipality in southern Brazil. Among them were individuals like André Antonio Maggi, the father of Blairo Maggi, the soybean magnate, former governor of Mato Grosso and agriculture minister in 2016 and 2017.

Migration within the Brazilian Amazon is now largely internal, as Amazonian residents move to cities as part of the worldwide phenomenon of urbanisation. Internal migration is motivated by lack of opportunity in

ha, 1973; municipality of Juruena. *Sociedade Imobiliária Noroeste do Paraná SA* – SINOP (Ênio Pipino & João Pedro Moreira de Carvalho); @ 645,000 hectares, 1974; municipalities of Sinop, Claudia, Vera, Santa Carmen. *Colinizador Líder SA* – COLIDER (Raimundo Costa Filho & Luiz Marques da Silva) @ 500,000 hectares in 1973; muncipalities of Colider and Nova Canáã.

^{*} Sinop: Sociedade Imobiliária Noroeste do Paraná SA, Cotriguaçu: Cooperativa dos Triticultores de São Miguel do Iguaçu do Paraná, Colíder: Colinizador Líder SA; Colniza is a reference to its colonisation heritage.

rural communities and the creation of temporary jobs linked to construction sites. For example, the hydropower projects on the Rio Madeira motivated approximately 80,000 people to move to northwest Rondônia during the construction of the dams at Santo Antônio and Jirau, while up to 20,000 migrants moved to Altamira during the construction of the Belo Monte hydropower project. He

Gold rushes have attracted tens of thousands of wildcat miners, known in Brazil as *garimpeiros*. The most famous gold field, or *garimpo*, was at Serra Pelada, a massive, hand-dug, open-pit mine about 100 kilometres east of the Carajás mineral complex, which operated between 1979 and 1992. Other gold fields that experience periodic rushes exist in southwest Pará (Tapajós-Crepori), southeast Pará (Cumaru-Oirlandia do Norte), northwest Mato Grosso (Alta Floresta-Jurua) and in the border regions of Roraima. The potential for future gold rushes remains latent, and there has been a renewed boom due to the rise of gold prices in international markets since 2018 (see Chapter 5). Where *garimpeiros* move after an ore body is exhausted is not well documented. Some undoubtedly move to other gold fields, but others may join the regional labour force or became small-scale entrepreneurs or cattle ranchers, depending upon their luck in the gold fields.

The formal mining sector in Pará has been a magnet for migrants. Work in the industrial facility is only one of several job opportunities, and economic activity linked to the mine is an accelerant for growth in the service sector. The region surrounding the Carajás mineral complex is one of the most heavily deforested landscapes in the Amazon, where more than eighty per cent of the area is dedicated to beef cattle ranching and an approximately equivalent area is occupied by large- and small-scale landholdings (see Chapter 5). Recent studies suggest that deforestation is a secondary impact of the mining industry, but it is not clear whether this is cause and effect or merely correlation. Many other drivers of deforestation developed simultaneously with the mining industry in Carajás, including colonisation projects, national highway infrastructure and land speculation.

Bolivia

In the middle decades of the twentieth century, Bolivian society was profoundly traumatised by the Chaco War and the loss of about thirty per cent of its national territory; before that, it had ceded Acre to Brazil and its coastal provinces to Chile. Schoolchildren learn at an early age that Bolivia lost those territories because the country failed to occupy them. Consequently, it welcomed the assistance in 1942 when a team of economists sponsored by the US Embassy outlined a strategy for focusing future development on the sparsely populated plains of its eastern lowland territories. Known as *Plan Bohan*, after its lead author, the document outlined a series of in-

vestments and resettlement initiatives that were referred to as the 'Marcha hacia el Oriente'.

In the 1950s and 1960s, this strategy led to the construction of all-weather roads linking the Andean highlands with the lowlands in Santa Cruz, Cochabamba and La Paz. US financial assistance via the Alliance for Progress was part of a broader strategy to combat the spread of leftist ideologies, particularly the guerilla insurgency led by Che Guevara in 1967.* Multilateral agencies subsequently supported key investments, including highways linking the Chapare colonisation zone with the agro-industrial landscapes of Santa Cruz, as well as export corridors to both the Pacific and Atlantic coasts.† Initiatives sponsored by the World Bank to promote food security and export commodities were leveraged with private-sector investments to create an export industry and key motor of job creation.† The two landscapes impacted by these investments, Chapare and the alluvial plain of Santa Cruz, were the focus of approximately ninety per cent of the country's deforestation between 1975 and 2010. 106

Throughout this period, however, the national economy experienced a severe contraction in its long-dominant mineral sector, causing it to default on private-sector, bilateral and multilateral debt. Bolivia was classified as a highly indebted poor country in the 1990s, which drastically limited its ability to borrow money and invest in infrastructure. Privatisation of the oil and gas sector led to an investment boom that dramatically increased revenue, followed by an upgrading of Bolivia's credit rating in 2010. This allowed the government, by then headed by Evo Morales, to access sovereign debt markets and significantly increase investments in transportation infrastructure.

Migratory Pathways

Starting in the 1960s, the Bolivian government actively promoted migration of highland Indigenous peasants to the lowlands. In the early years, this effort was organised and led by the central government with assistance from overseas development agencies. Over time, settlement policies changed to reflect budgets and governing philosophies, but they have transcended

^{*} The Alliance for Progress (*Alianza para el Progreso*) was initiated by US President John F. Kennedy in 1961 in response to the Cuban revolution and the threat of left-wing insurgencies in several countries.

[†] The IDB funded construction of the Chimore-Yapacani highway @ US\$80 million in 1979, the second stage (II Etapa) of the Chimore-Yapacani highway @ US\$40 million in 1987. Source: IDB.

^{‡ (1)} Eastern Lowlands: Natural Resource Management and Agricultural Production Project was a US\$35 million project approved in 1990 and executed between 1998 and 2000. (2) Central Aguirre Portuaria was financed by the IFC in 2002. (3) Integration Corridor Santa Cruz-Puerto Suárez was a US\$100 million highway project approved in 2000 and completed between 2000 and 2015.

governments and continue to be a central pillar of the current administration. Migration has occurred in three separate regions, reflecting the interests of regional elites and the availability of a source population that provides migrants.

The oldest of these colonisation corridors is the La Paz Yungas, where a series of interconnected valleys situated between the Altiplano and the Amazonian lowlands has functioned as a migratory corridor for generations. The Upper Yungas is the major source of coca leaf, which is consumed in Bolivia as a mild stimulant, and has long provided the city of La Paz with tropical fruit and other basic food commodities. In the early 1960s, a road was extended into the Lower Yungas to establish the pioneer community of Caranavi and connect to the first wildcat gold mines in Tipuani and Mapiri.

Colonizadores flocked into the region, deforesting mountain slopes to cultivate food crops for their own consumption, as well as coffee, cacao and tropical fruits for both domestic and international markets. By the early 1970s, a gravel road had penetrated the lower foothills, opening up a region known as the Alto Beni. The road was extended in the mid-1980s to connect with the cattle ranches on the seasonally inundated savannas of the Llanos de Moxos. The easily accessible montane landscapes of the La Paz Yungas have largely been occupied; consequently, migrants are now moving into the landscapes on the piedmont, particularly the road corridor between Buenaventura and the Peruvian border (see Chapter 2).

Most of the immigrants who have populated the La Paz Yungas over the last fifty years have been Aymara-speaking Indigenous peasants from the Altiplano, many of whom have a tradition of establishing farms at multiple localities at different elevations. This multi-altitudinal production strategy diversifies and expands their production, while mitigating the risk from crop failure. It is an important Indigenous cultural adaptation that has contributed to their success as pioneers. Many families have established urban residences in La Paz or its rapidly growing sister city of El Alto, which facilitates their ability to commercialise products in urban markets.

Southeast of La Paz is Bolivia's most conflictive colonisation zone, the Chapare. Large-scale immigration into this region was initiated in the mid-1960s to alleviate the overpopulation of the Quechua-speaking communities in the Andean highlands surrounding the regional capital of Cochabamba. Funds from USAID's Alliance for Progress financed a road over the Eastern Cordillera, where the interaction of topography and prevailing winds creates a super-humid ecosystem. ¹⁰⁷ Precipitation exceeds six metres per year, making the cultivation of most traditional crops problem-

^{*} El Alto is located on the Altiplano adjacent to La Paz, which is situated in a deep valley adjacent to the Altiplano. In 1980, El Alto had fewer than 10,000 inhabitants, but by 2015 that number had grown to about 700,000, making it one of the fastest-growing cities in the New World.

atic; however, the new residents soon discovered that a subspecies of coca was well adapted to these conditions (see Chapter 3). The Chapare was soon a magnet for new settlers, and small farms, typically no larger than forty hectares, expanded across the piedmont. Immigration and settlement eventually extended further southeast towards Santa Cruz via a modern road that created a national transportation corridor integrating Bolivia's three major cities: La Paz, Cochabamba and Santa Cruz.

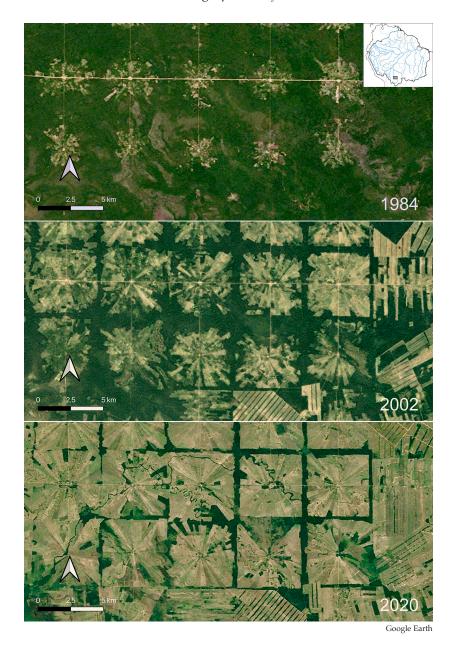
Migration into the Chapare was supercharged in the late 1980s, when tin prices collapsed and the state-owned mining company terminated tens of thousands of employees. Many took their severance packages and moved their families to the lowlands to cultivate coca. The population doubled from 100,000 in 1976 to 200,000 in 1990, then doubled again by 2015. ¹⁰⁸ Bolivian miners are renowned for their labour activism, and migrants soon organised into syndicates, which facilitated their ability to acquire land. Among them was a young man named Evo Morales, who became the leader of the coca growers association in the Chapare and, eventually, president of Bolivia.

The largest and most important colonisation zone in Bolivia is the alluvial plain of Santa Cruz, an area blessed with fertile soils and a seasonal climate ideal for tropical agriculture. The local *Cruceños* had already established a production model based on sugar cane, rice and beef cattle before the 1960s, when the government began the relocation of tens of thousands of highland peasants. In the 1970s, planned communities were established along three parallel roads arranged in an area known as the Brecha Casarabe. The government stopped proactively organising the movement of people, but continued to support the spontaneous settlement of state lands by issuing provisional land titles and providing basic services. ¹⁰⁹

Santa Cruz welcomed immigrants from other countries and continents, including Japanese (1950s and 1960s) and Mennonites (1970s to present), as well as investors in industrial-scale farms (larger than 10,000 hectares) from Brazil, Argentina, North America and China. By some estimates, as much as fifty per cent of the soy crop is produced by foreigners; their impact is much greater than the volume of soy they harvest, however, because international immigrants have introduced technology and capital.

The smallholder farmers, who now refer to themselves as *Interculturales* rather than *Colonizadores*, *have adopted many farming practices pioneered by the Mennonite and Japanese immigrants who also own relatively small

^{*} The motivation for the name change is related to the government's use of the term 'colonisation' to refer to the domination of international [Western] business and political interests, but also to reinforce their view that they have an inherent right to settle on undeveloped land and are not 'colonisers' who are usurping land from lowland populations, including both Indigenous populations and 'Cruceño' communities descended from European immigrants of the 18th and 19th centuries.



The Brecha Casarabe was a settlement project launched in the late 1960s in Santa Cruz, Bolivia, by the Instituto Nacional de Colonización. The first settlers pursued subsistence livelihoods, but by 2002 farmers had adopted a diversified crop model based on producing food for domestic markets. By 2020, most landholders had adopted intensive production technology, including the cultivation of soy for export markets.

The Legacy of Migration



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The cultural precepts of the Mennonite faith foster large families and agrarian lifestyles, which have motivated approximately 60,000 families to settle and clear more than 900,000 hectares of seasonal forest since they started migrating to Bolivia in the 1970s (Killeen et al. 2009).

farms. Many choose to produce foodstuffs for national consumers via the informal market economy that characterises their social group, but they are increasingly being integrated into the soy-dominated industrial economy. ¹¹⁰

The population of the Santa Cruz Department has grown from about 300,000 in 1960 to more than three million in 2022. About seventy per cent of this growth has occurred within the metropolitan area of the city Santa Cruz de la Sierra, but the urban economy is highly dependent upon the farm economy. The agriculture sector's spatial footprint continues to expand, and institutions representing agribusiness hope to double or triple that area over the next decade. The state, at both the national and regional levels, supports both the smallholder and corporate agendas to varying degrees.

Peru

Policies designed to occupy and populate the Peruvian Amazon began about seventy years ago with construction of a trunk highway connecting Pucallpa on the Ucayali River with Lima. Named after a Peruvian historian, the construction of the *Carretera Federico Basadre* is a landmark event in the nation's history, because it provided the first reliable means of communication between the capital and the Amazonian provinces that make up more

than fifty per cent of Peru's territory. The next major initiative began when the government added a northern spur through the montane forests of the Huallaga Valley, which was intended to integrate its northern Amazonian provinces while opening a lush tropical valley to agricultural development (Figure 6.9)

Construction of these two highways was financed with state resources in the 1970s, when a left-wing military government had only limited access to international finance. After a return to civilian government in the 1980s, multilateral institutions financed several project-based initiatives, but these were soon sidelined when the country entered a period of civil unrest that impeded economic growth and foreign investment. The economy improved in the 1990s following the end of the civil war, and the government, then led by Alberto Fujimori, initiated a series of system-wide investments in transportation infrastructure using public moneys leveraged with loans from the IDB.*

The system-wide approach was complemented in 2000 with the Initiative for the Integration of the Regional Infrastructure of South America (IIRSA),† which improved the strategic planning of highway investments in general, while promoting public-private partnerships (PPP) to accelerate completion of key construction projects (see Chapter 2). Under the neoliberal scheme, construction companies financed the cost of construction in exchange for operating concessions that would generate revenue to amortise the debt. At the time, PPPs were seen as an innovative mechanism for accelerating investment, while ensuring repayment of a sovereign debt. Unfortunately, their utility has become clouded by the *Lava Jato* bribery scandals (see below). 112

Migratory Pathways

Migration into the Amazon Lowlands of Peru in the last half of the twentieth century occurred via four major and four minor highway corridors All have been settled by migrants originating in the Andean highlands, typically referred to as *Colonos* or *Campesinos*. The four major migratory routes are now all IIRSA-sponsored transportation corridors, while the four minor

^{*} Rehabilitation and Maintenance Roads Program (1991), Roads Rehabilitation Program, (1994); Roads Rehabilitation Program (1998); National Highway System Five-Year Infrastructure Program (2006); The National Highway System Serviceability Improvement Project (2006). Source: IDB (https://www.IDB.org/en/project-search)

[†] Iniciativa para la Integración de la Infraestructura Regional Suramericana (IIRSA) is an investment framework that seeks to link South America's economies through investments in transportation, energy and telecommunications. IIRSA was launched in early 2000 by the Inter-American Development Bank (IDB) in coordination with the Corporación Andina de Fomento (CAF) and the Fondo Financiero para el Desarrollo de los Países de la Cuenca del Plata (FONPLATA). See Chapter 2.

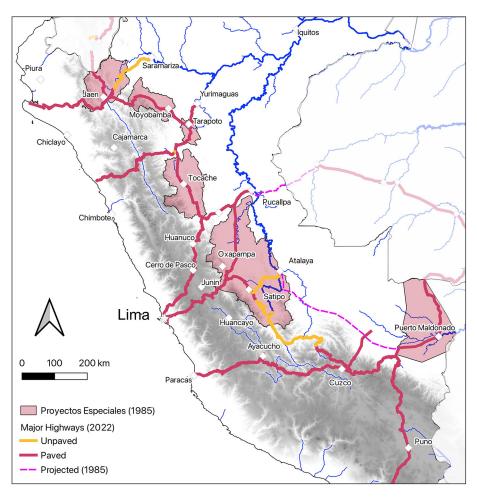


Figure 6.9: Proyectos Especiales (PE) were launched by the government of President Fernando Belaunde in 1985 to promote the settlement of landscapes adjacent to the proposed Carretera Marginal de la Selva; simultaneously, the colonisation zones were connected to the Pacific Coast by highways that are now referred to as 'Interoceanic Corridors' (see Chapter 2). From North to South: PEJSIB: Jaén – San Ignacio – Bagua (Amazonas); PEAM: Alto Mayo (San Martin); PEHCBM: Huallaga Central – Bajo Mayo (San Martín); PEAH: Alto Huallaga (San Martin and Huánuco); PEPP – Pichis Palcazú (Huánuco, Junín, Pasco y Ucayali); PEMD: Madre de Dios (Madre de Dios).

Data source: Belaunde 1985.

corridors tend to connect isolated villages in the foothills with highland population centres; typically, they track a river and often provide access via unpaved roads to a region known for coca production (Annex 6.2).

The modern history of migration and settlement is best characterised by the frontier landscapes in the Department of Ucayali, on the piedmont between the foothills and the departmental capital of *Pucallpa*. The department was home to about 175,000 inhabitants in 1970, but by 1990 had a population of 400,000, and in 2020 was home to more than 850,000 people, almost all of them immigrants or the descendants of immigrants. About 200,000 reside within Pucallpa, an important river port and logistical centre, while the rest are distributed in dozens of communities along the main trunk highway or secondary roads.

The second most important migratory corridor is the Huallaga Valley, which can be subdivided into two sections: the upper valley, which is situated largely within the Department of Huánuco, in what was originally the cloud forest; and the lower valley, in the Department of San Martin. The upper valley was largely wilderness until the two major highways were built. Early colonists around Tingo María included coffee farmers of European descent, as well as highland Indigenous migrants who pursued the typical mixed production model of subsistence and cash crops. Coca became popular in the 1970s, and the valley was dominated by violent militant groups in the 1980s. The upper Huallaga Valley includes Tocache, the site of Peru's first large-scale oil palm plantations, which were established in the late 1970s (see Chapter 3).

The lower valley was settled by Spanish (*Criollo*) settlers because of its mild tropical climate, fertile soils and abundant water resources. The floodplain is occupied by medium-scale farmers who managed to avoid the confiscation of their properties during the agrarian reform of the early 1980s, although many suffered from the guerilla conflicts of the 1980s and 1990s. The influx of highland peasants that accompanied the construction of the Carretera Ferdinando Belaunde led to widespread settlement and deforestation on the hills and ridges surrounding the floodplain (see <u>Annex 6.2</u>).

The population of San Martin grew from about 250,000 in 1970 to more than a million by 2015. The *Corredor Interoceánico – Norte* intersects with the *Carretera Marginal de la Selva* at the departmental capital of Tarapoto and terminates at Yurimaguas. The landscape between Tarapoto and Yurimaguas is an active colonisation zone with the highest deforestation rate in the country. The land rush has now moved to the eastern side of the last Andean ridge and continues to expand across the flat and rolling landscapes adjacent to the Huallaga River below the *Pongo de Aguirre*. Oil palm is the lead cash crop, attracting both corporate and smallholder farmers (see Chapter 3).

Peru's most active migratory destination is the Department of Madre de Dios, where a gold rush has attracted an estimated 15,000 miners. The total number may be greater, however, since many are temporary migrants who move to the area to seek their fortune or, more likely, obtain a tough job with no benefits. An additional 30,000 individuals make a living by selling the miners goods and services, representing about 35 per cent of the total population (See Chapter 5). Immigration to Madre de Dios has been greatly facilitated by the construction of the *Corredor Interoceánico – Sur*. The establishment of small farms along the highway is the second-largest cause of deforestation after mining.

Peru's river network is also a migratory pathway, and there are hundreds of settlements along the Ucayali River and its backwater channels and tributaries. The Peruvian state has yet to finalise the land tenure formalisation process (see Chapter 4), but most families have claimed forty-hecatre plots since the colonisation process began in the 1960s. Most cultivate annual crops for family consumption, but sell excess produce into the national food market; most also allocate land to pasture and perennial cash crops (see Chapter 3). Coca is cultivated in small patches along the margin of the forest frontier.

The largest single migratory destination in the Peruvian Amazon is Iquitos, whose history is completely different from that of the other migratory routes. Because Iquitos has no road link to the coast, migrants arrive by river or air. Immigrants have moved to Iquitos in search of jobs in the oil industry or one of the service sectors that dominate the local economy. The city grew rapidly in the 1970s and 1980s following the discovery of oil, which continues to dominate the local economy.

About half the families who have moved to Iquitos are from lowland Ribereño communities and are descendants of Indigenous people who were assimilated into *mestizo* culture during the rubber boom. Most of the rest have come from the Pacific Coast, particularly Lima. The oil industry requires skilled workers, who can only be provided by universities and trade schools located in large urban centres. Iquitos was still a medium-size city with a population of 100,000 when oil was discovered in the 1970s along the border with Ecuador. It subsequently grew and, with more than 500,000 inhabitants, is now the largest city in the Western Amazon. Most residents have settled their families in the city, but many have claimed plots of land in the colonisation zone along the highway constructed between Iquitos and Nauta, a town located about 100 kilometres upriver near the junction of the Marañon and Ucayali rivers. Like Leticia in Colombia and Tabatinga in Brazil, Iquitos does not have a terrestrial connection to other population centres. This isolation limited deforestation to the Nauta-Iquitos road; until recently, when a corporation linked to the palm oil industry started

clearing forest across the river from Iquitos to establish a cacao plantation (see Chapter 3).¹¹³

Terror and Coca

The other major social and political phenomenon that has impacted the development of Peru's Amazonian provinces is the cultivation of coca, which is produced in six regions in the eastern foothills of the Andean Cordillera (See Chapter 3). The expansion of coca for the illicit drug trade began in the upper Huallaga Valley in the 1960s and spread to other parts of the country, particularly the VRAEM (Valley of the Apurímac, Ene and Mantaro Rivers) region on the border between Cuzco and Ayacucho and the La Convención and Lares districts in the Urubamba Valley near the international tourist site of Machu Picchu (see Chapter 3). These regions became epicentres of the armed conflict perpetrated by two competing insurgencies, the Maoist *Sendero Luminoso*, or Shining Path, and the Marxist *Movimiento Revolucionario Tupac Amaru (MRTA)*, in the 1980s and early 1990s.*

These two groups occupied vast stretches of the rural countryside, and the violence they inflicted on the native population, combined with a harsh response from government forces, led to more than 65,000 deaths. 114 As many as 450,000 individuals were forced to abandon their homes, including approximately 15,000 Asháninkas, who either fled their villages and retreated into the forest or were forced into concentration camps by *Sendero Luminoso* (see Chapter 11). 115 The violence effectively halted investment by agro-industrial enterprises in the Peruvian Amazon, although the illicit activity stimulated the expansion of coca farms on the forest frontier. The organised violence ended in the mid-1990s, but the government has been unsuccessful in reducing cultivation of illicit coca (see Chapter 3). The strategic vision of the Maoist leadership is no longer a factor, but many of the guerilla combatants remain active as criminal actors. Peru continues to produce about thirty per cent of the global supply of illicit cocaine. 116

The cultivation of coca has been significantly reduced only in the *Selva Central* and Huallaga Valley. Both of these regions have been the recipients of significant multilateral development assistance, particularly in alternative production strategies such as coffee, cocoa and palm oil, as well as in

^{*} There were two groups that competed in the effort to bring down the established Peruvian state: The Shining Path section of the Communist Party of Peru, usually referred to as *Sendero Luminoso*, was inspired by Maoist tenets based on peasant revolt, and the *Movimiento Revolucionario Túpac Amaru* (MRTA), which was inspired by the Cuban revolution and an Indigenous revolt led by an 18th-century Indigenous leader. *Sendero Luminoso* collapsed after the arrest of its founder Abimael Guzmán in 1993, while the MRTA ceased to be a serious threat after its failed attempt to extract concessions by occupying the Japanese ambassador's residence between December 1996 and April 1997. Source: *Comisión de la Verdad y Reconciliación – Perú* (2008).

improved health and education facilities.¹¹⁷ Not incidentally, both regions are part of IIRSA-sponsored infrastructure projects that have greatly facilitated the connection of their producers with domestic and global markets. In contrast, the landscapes that have continued to embrace coca production remain relatively isolated from the national economy.

Ecuador

Throughout most of the twentieth century, the Ecuadorian authorities pursued a geopolitical strategy that reflected a long-held conviction that they were cheated out of large territories in the Western Amazon. Most of their claims were adjudicated in favour of Peru and they were on the losing side of border disputes in 1860, 1903 and 1941. Consequently, successive governments were intent on not losing another square metre of what they fervently believed was their national territory, a policy that led to the construction of several highways and deliberate policies to foster migration into their lowland provinces.

Peru and Ecuador resolved their differences in 1998, after another border dispute, via an arbitration process coordinated by the governments of Brazil, Argentina, Chile and the United States. ¹¹⁸ In the process, the countries established paired national parks on both sides of the border, and an ambitious IIRSA-sponsored initiative was launched to provide Ecuador with direct access to the Amazon waterway at Puerto Morona (see Chapter 2). The resolution of the border conflict and the much-improved transportation infrastructure opened up the *Cordillera del Condor* to large-scale mining operations operated by Canadian and Chinese corporations (see Chapter 5).

Migratory Pathways

Migration into Amazonian Ecuador has occurred via four highway routes that connect urban centers in the Andes with a town or small city in the lowlands; from north to south, they include Quito to Nueva Loja (E10), Ambato to Puyo (E30), Cuenca to Macas (E40) and Loja to Zamora (E45). These roads channelled migrants into two major colonisation landscapes: a north-south corridor that runs along the base of the Andes, and the Sucumbíos-Orellana quadrant, which is also the country's primary oil producing region. The population along the piedmont grew from about 160,000 inhabitants in 1970 to more than 520,000 by 2017; simultaneously, the inhabitants of the Sucumbíos and Orellana provinces increased from fewer than 12,000 to more than 350,000.

Most communication was up and down mountain valleys between individual highland and lowland population centres, but eventually these communities were linked by a rudimentary north-south highway (Route 45). Multiple roads extended east into the Amazon lowlands, including one along the border to Tiwinza, a military post on the Santiago River, and

an alternative route from the north to connect with Puerto Morona on the Morona River.

This latter route caused significant encroachment by *Colonos* on traditional lands of the Shuar Indigenous people in the 1970s and led to an unusual effort on their part to protect their land. This occurred two decades before Indigenous organizations launched their campaign to promote communal tenure regimes (see Chapter 11), and Shuar families had no option but to apply for legal title using the administrative procedures of the national colonisation agency (see Chapter 4). This obligated them to deforest small plots within the larger landscapes of their traditional territories.¹¹⁹

In 1997, the government allocated funds to improve infrastructure, with the modernisation of Route 45, now known as the *Troncal Amazónica*.* Settlement along the highway and into the Amazonian lowlands occurred mainly in the 1970s via development initiatives organised by a regional development entity (CREA)[†] with financing from the IDB. ¹²⁰ The area now specialises in cattle production and seeks to establish a niche market for high quality beef for the national market (see Chapter 2).

Migration into the southern sector was supported by a regional development organisation, but most immigrants came on their own.¹²¹ They included Indigenous Quechua speakers, as well as Ecuadorians of mixed racial heritage, all of whom encroached upon the traditional lands of the Shuar (see Chapter 11).¹²² The super humid climate and rolling topography make intensive cultivation impossible, and the principal economic activity is raising beef and dairy cattle.

In contrast, colonisation of the Sucumbíos-Orellano quadrant reflects a proactive settlement policy implemented by the central government after the completion of the highway between Quito and Lago Agrio in 1967.‡ The military government declared Sucumbíos a 'zone for migration and expansion' in 1972 and sent teams of surveyors to lay out transects of fifty-hectare plots (250 metres by 2,000 metres) for distribution to new arrivals. The network of nearly identical landholdings was established along a rapidly expanding secondary road network, which was created to support the feeder pipelines that carry crude oil to pumping stations in Lago Agrio (Figure 6.10). 123

^{*} The *Troncal Amazónica* is the Ecuadorian component of the *Carretera Marginal de la Selva*, the pre-IIRSA initiative intended to integrate the Andean countries via a lowland highway corridor extending from Venezuela to Bolivia.

[†] CREA: Centro de Reconversión Económica del Azuay, Cañar y Morona Santiago.

[‡] Also known as Nueva Loja, the name used by the first settlers, who were immigrants from the southern city of Loja. The petroleum sector tends to use the original cartographic designation of Lago Agrio, after Sour Lake, Texas, the home of some of the early US oil workers.

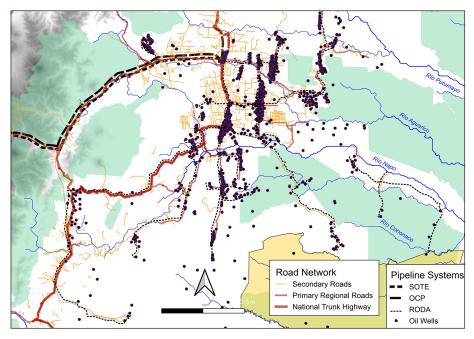


Figure 6.10: The road network in Amazonian Ecuador closely corresponds to the petroleum pipeline system, in part because the government promoted settlement along service roads during the 1970s.

Data sources: GEM 2023 and RAISG 2022.

The soils in the quadrant are relatively fertile, which has allowed for the development of a diverse assemblage of productive systems, including food staples and cash crops such as coffee, cocoa and palm oil (see Chapter 3). Like other colonisation schemes of the 1970s, poor infrastructure and inadequate public services led to widespread disenchantment, and many farmers abandoned their farms. Simultaneously, oil field workers filed claims to acquire plots or purchased abandoned farms from people seeking to leave the region. Many owners adopted a beef production strategy that allowed them to meet the legal requirements for a land claim, but which could be managed by an absentee owner. Consequently, the ethnic makeup of the quadrant is relatively diverse.

The government now seems dedicated to promoting the development of Amazonian Ecuador by embracing the intensification of agricultural production on previously deforested landscapes, while promoting a diversification of production strategies. The government continues to build new oil pipelines and access roads as it expands into new production fields in previously remote landscapes in and around Yasuní National Park (see Chapter 5). The government's insistence on developing these assets is highly

controversial and a source of conflict with Indigenous groups, particularly the Waorani, whose ancestral territory lies over Ecuador's most valuable oil reserves.¹²⁴

Colombia

The modern history of internal migration in Colombia began in a manner that was not unlike the processes organised by the governments in Brazil and the other Andean countries in the 1960s and early 1970s. However, that process was derailed first by a civil war and subsequently by the production of illicit drugs, largely because of tactics pursued by the *Fuerzas Armada Revolucionarias de Colombia* (FARC).* The conflict effectively suppressed state infrastructure investment while freezing land acquisition by middle-class families and investors. At the same time, however, it fuelled the migration of displaced peasants, who opted to cultivate coca under the protective umbrella of the FARC.

The conflict officially ended in 2017 via the so-called 'Peace Process', which brought momentous change to the Colombian Amazon. ¹²⁵ The FARC no longer exists as an organised military entity, but it has been replaced by criminal groups composed of demobilised guerillas and militia members. Unfortunately, the state has not established a meaningful presence in the region and the cessation of hostilities has triggered a land rush supercharged by the drug trade and the cattle industry. ¹²⁶

Migratory Pathways

Before the civil war, the administration of President Carlos Lleras Restrepo (1966–1970) created the *Instituto Nacional de Colonización (INCOR)* in an attempt to respond to the demand for land by the rural poor. The strategy was supported by multiple grants from The World Bank, including The Caquetá Land Colonization Project, ¹²⁷ which sought to expand, organise and support the spontaneous colonisation process of settlers moving from Huila in the previous two decades. Unfortunately, these were not particularly successful, although the government support consolidated the now-predominant cattle production model.

^{*} The FARC was founded in 1964 as the military wing of the Colombian Communist Party in response to rural violence (*La Violencia*) during a coalition government composed of the country's two major political parties. The FARC financed its activities by a combination of 'taxes' imposed upon occupied communities, kidnappings and the illicit cocaine trade. The FARC participated in failed peace negotiations in the 1980s and 1990s, but used these truces to consolidate territorial control. During the administration of Alvaro Uribe (2002–2010), a successful military campaign essentially defeated the FARC in the countryside, which allowed President Manuel Santos (2010-2018) to negotiate an end of hostilities and initiate a peace process. Source: Mapping Militant Organizations at Stanford University: http://web.stanford.edu/group/mappingmilitants/cgi-bin/groups/view/89

Caquetá was both a source and a sink of refugees in the 1980s, as people moved within the country to escape violence. During the 1990s and 2000s, the department was a net source of migrants, as an estimated 100,000 people were forced to vacate approximately 450,000 hectares of land. ¹²⁸ Many moved to Bogotá. As of 2020, the Department of Caquetá had a population of about 300,000 inhabitants, 99 per cent of whom were descendants of immigrants who had moved to the region in the last fifty years.

A similar history explains the settlement of the Colombian Putumayo, which occurred originally in conjunction with the advent of oil exploration and was fed by the movement of individuals from the adjacent Andean highlands. Although cattle ranching occupies the largest spatial area, deforestation was largely driven by coca cultivation during most of the 1990s and 2000s. As in Caquetá, ranchers consolidate smaller landholdings that were originally created by coca farmers.

Migration into Meta and Guaviare in the 1990s and 2000s was almost entirely linked to the production of coca leaf and efforts by the FARC and other militias to extend their influence over the landscapes at the edge of the agricultural frontier. Successive waves of peasant settlers have occupied the landscapes surrounding *Parque Nacional Natural Sierra de la Macarena*, which the FARC has used as a staging area and refuge since the 1960s.

Their operational tactics changed in the 1980s, when they embraced the illicit drug trade as a source of revenue and actively protected peasant farmers growing coca leaf.¹²⁹ Roads did not exist in the forest frontier, nor was it advantageous for coca growers to colonise landscapes accessible by vehicular transport. Consequently, the coca growers and the influence of the FARC expanded by using forest trails and river networks.

The peace process has radically changed this dynamic. Land speculators are financing the relocation of small farmers, who are encouraged to 'move on' as their original holdings are consolidated into cattle farms that are now accruing value as the region opens to investment. The central government hopes to limit development in the buffer zones around both Macarena and Chiribiquete national parks, and has limited its infrastructure investment to a limited number of major arteries; however, the local officials and land speculators have been building secondary and tertiary roads at an alarming rate.

Venezuela and the Guianas

Successive Venezuelan governments have viewed the natural resources of the Guiana Shield as an economic asset that should be used for national development. This strategy was formulated in the mid-twentieth century and led to the creation of a state-owned enterprise, the *Corporacion Venezolana de Guayana* (*CVG*), to develop mineral and hydrological resources. This decentralized, state-owned conglomerate was established in the 1960s and

created a variety of subsidiaries dedicated to the mining and processing of iron ore and steel, bauxite and aluminium, and the development of coal and hydropower energy. The state's presence was further consolidated in the early 1970s, when President Rafael Caldera (1969–1974, 1994–1999) built a modern highway through the southeastern Gran Sabana region to connect with BR-174, which linked Venezuela with the Brazilian Amazon.

Originally, most of the CVG subsidiaries were efficient producers and competed successfully in international mineral markets; however, their viability as business enterprises declined as their mines aged, industrial assets depreciated and national competitiveness eroded because of mismanagement. The administrations of President Hugo Chávez (1999–2013) and his successor, President Nicolás Maduro (2013–present), bankrupted most of these state-owned business enterprises. Nevertheless, migration into the region has continued because of the allure of the ongoing gold rush, which is being facilitated by the military authorities who now oversee development in the southeastern state of Bolívar.

Guyana and Suriname are coastal countries with historical and cultural ties to the island nations of the Caribbean. Economically they are very dependent on their mineral resources, and they apparently view their Amazonian territories as a natural resource to be exploited when opportunities present. Neither country has designated large areas for protection, and their indigenous territorial systems are relatively small. Most land is held in an unallocated forest reserve (see Chapter 5). The government of Guyana recently has sought to develop an international transport corridor that would link the emerging agricultural landscapes in Roraima, Brazil, with port facilities in Georgetown. This could change the land-use dynamic along that road as settlers create outposts to provide key services to the transport sector.

The borders between Guyana, Suriname and French Guiana have been managed diplomatically among the colonial powers and the independent states that succeeded them. None of these states seems genuinely interested in colonising their interior provinces. The border between Venezuela and Guyana is the only remaining contested terrestrial border in the Western Hemisphere. The long-simmering dispute over Guyana's mineral-rich Essequibo region, which never led to armed conflict, flared up again following the 2015 discovery of an offshore oil deposit potentially worth hundreds of billions of dollars.

Migratory Pathways

The Guiana Shield has escaped the large-scale settlement and deforestation that characterise both Amazonian Brazil and Andean countries. This does not mean, however, that it has not been impacted by migration. The region is home to tens of thousands of wildcat gold miners exploiting mineral re-

sources in the thinly populated hinterlands of Venezuela, Guyana, Suriname and French Guiana. These miners are a combination of local inhabitants and fortune-seeking immigrants, mainly Brazilian, whose numbers fluctuate in response to changes in the price of gold. The Suriname government estimates the country has about 20,000 small-scale mining operations, each of which probably employs between five and ten individuals. Most mine owners are native-born Maroons who employ thousands of Brazilian *garimpeiros*.

It is difficult to know precisely what is transpiring in Venezuela because of the chaotic governance that has characterised the country for the last decade. According to 2011 national census, the municipality of Sifontes had a population of 51,000,¹³¹ but recent reports suggest that this number may have surged to more than 400,000 by 2016.¹³² The gold mining region is controlled by the military, which operate numerous mines via joint ventures with Venezuelan businesspeople.

Many of these immigrants may not be gold miners, however, but individuals importing scarce goods from Brazil or seeking to emigrate. At the end of 2022, approximately 70,000 Venezuelans were residing in Roraima and Amazonas, with some 33,000 living in makeshift shelters and camps. Most, if not all, survive by working in the informal economy. 133

Cultural Attitudes and Constituencies

The constituency for the conservation of the Pan Amazon is broad based and diverse. Academics and civil society organisations have been successful in framing conservation of the Amazon as an issue of global importance. They have formed an alliance with Indigenous and traditional peoples, and have convinced a majority of urban populations that the Amazonian ecosystem is a natural asset that will benefit future generations. Most citizens of the region's subnational jurisdictions also support the principles of sustainable development and generally accept the consensus view of the need to conserve the region's biodiversity and ecosystem services.

Nonetheless, this generalised support has not translated into a change in the production systems that are driving deforestation and other forms of environmental degradation. This apparent contradiction is the logical result of people's economic dependence on conventional development. Most citizens of the Pan Amazon depend either directly or indirectly on extractive production models and the economic growth that occurs when natural capital is converted into financial capital.

Advocates for conventional development likewise originate from a similarly broad and diverse populace, but this view is particularly strong in communities composed of recent immigrants and their descendants who live on or near the agricultural frontier. They include obvious stakeholders, such

as farmers, ranchers and miners, but also their employees, service providers and supply chain intermediaries. Proponents of orthodox development occupy key positions in the conventional economy and consequently have an outsized influence on decisions that drive investment. This group includes the executives of banks, construction companies, manufacturing enterprises and multinational energy corporations that are key intermediaries in the conversion of natural capital to financial capital.

Family Corp., (Un) Limited

Corporations have been present in the Amazon since the eighteenth century, when the Duke of Pombal used a charter company to manage the recently confiscated assets of the Jesuits. In the late nineteenth century, sophisticated investors from London and New York speculated in land deals and rubber concessions in an early manifestation of a globalized economy. These ventures were followed by projects conceived by eccentric visionaries, such as Henry and Edsel Ford and Daniel Ludwig, whose investments in plantation forestry failed because they did not understand tropical ecology or the social dynamics of mid-century Amazonia.*

Investments by the extractive sector in the mid-nineteenth century were more successful because they were organised by multinational corporations with experience in managing operations in remote geographies (Peru, Ecuador, Bolivia, Guyana, Suriname)[†] or by state-owned corporations with practical knowledge of their own country (Brazil, Venezuela). These ventures have a legacy of multiple environmental and social impacts and have garnered public interest and galvanised the ire of environmental and social advocates. Private domestic corporations have also exerted significant influence but operate with only a fraction of public oversight. Their activities are often difficult to track, particularly companies that are not publicly traded on domestic stock exchanges and therefore do not publish financial statements that detail their assets and liabilities (see Chapter 5).

Some of the most influential Brazilian companies have evolved from family enterprises that flourished thanks to the vision and hard work of an

^{*} Edsel Ford created Belterra, a 5,000-hectare rubber plantation near Santarem (Pará) in the 1930s after the failure of the plantation of his father, Henry Ford, at Fordlândia in the 1920s. Daniel K. Ludwig planted 100,000 hectares of exotic tree species for a pulp and paper project on the Rio Jari between 1967 and 1981. Both endeavours were doomed to bankruptcy, but both still function as commercial enterprises managed by Brazilian entities. Sources: Russell 1942; Jordan and Russell 1989.

[†] Peru: Occidental Petroleum; Ecuador: Texaco (now Chevron); Bolivia: Gulf Oil; Guyana and Suriname: Alcoa. Brazil: Companhia Vale do Rio Doce (CVRD), now Vale S.A.; Venezuela: Corporación Venezolana de Guayana (CVG). See Chapter 5.

exceptionally gifted individual. Success in one field led to the accumulation of financial capital that was deployed to expand and diversify operations. Some evolved into complex holding companies that now finance expansion via joint ventures and international credit markets. A select few have chosen to raise capital by selling equity shares on domestic or international stock markets, although they typically retain majority control to maintain the family legacy. Family corporations are bottom-up success stories and, unsurprisingly, tend to enjoy considerable local and regional support.

Family companies born in Brazil's Legal Amazon have shared the business domain with corporations established in the political and financial centres of São Paulo and Rio de Janeiro. Their involvement was subsidised by the federal government via the *Superintendência do Desenvolvimento da Amazônia (SUDAM)*,* which actively recruited the largest financial and manufacturing firms as part of a national strategy to develop the Amazon. SUDAM is a quasi-autonomous agency with three major objectives: (a) ensure the occupation of the Amazon by Brazilians; (b) create an economically stable and progressive society; and (c) integrate the Amazon into the larger Brazilian economy. SUDAM has coordinated most of its investments with the Banco da Amazônia, which evolved from an agency created to support the rubber industry during World War Two.†

Although the original justification for mass colonisation of the Amazon was, in part, to provide land to the rural poor, there was always a policy component to provide corporations access to public lands. This became manifest in 1975, when the government changed colonisation strategies to prioritise the distribution of large land holdings to companies and wealthy individuals. The change in policy was managed via SUDAM, which legitimised hundreds of livestock operations ranging in size from a thousand to several hundred thousand hectares (see Chapter 4). Most were fundamentally unprofitable and would never have existed without the incentives, particularly tax credits, from SUDAM.¹³⁴

Following a corruption scandal in 2001, President Fernando Henrique Cardoso (1995–2003) converted SUDAM into the *Agência de Desenvolvimento da Amazônia (ADA)*, which was downsized and reorganised to focus on 'Regional Development Plans', and tax incentives were restructured to

^{*} SUDAM is a descendant of the *Superintendência do Plano de Valorização Econômica da Amazônia*' (1948–1966), which was created by President Getulio Vargas. It was renamed SUDAM – *Superintendência Desenvolvimento Amazônia* (1966–2000) – by the military head of state, Castelo Branco. Source: http://www.amazonialegal.com.br/textos/Sudam.htm

[†] SUDAM's financial resources are managed via several public financial entities, including the *Fundo de Investimento da Amazônia* (FINAM), the *Fundo Constitucional de Financiamento do Norte* (FNO) and the *Fundo de Desenvolvimento da Amazônia* (FDA).

rationalise support for the private sector.* SUDAM was resurrected by the first administration of President Lula da Silva (2003–2011) but, rather than responding to a national or regional development strategy, the agency now executes projects embedded in the national budget by individual members of Congress. 135

A large share of the original corporate land grants supported by SU-DAM were located between the Araguaia and Xingu rivers in southeastern Pará and northeastern Mato Grosso. Perhaps the most notorious was the Fazenda Suiá-Miçu (695,000 hectares), which was purchased by Ariosto da Riva from the state of Mato Grosso for 20 million cruzeiros (approximately US\$ 150,000) in 1960. **136* An audacious entrepreneur specialising in private colonisation projects, Riva enlisted the Grupo Ometto (now COSAN) as a partner in a speculative land scheme near São Felix de Araguaia. In 1971, the fazenda was sold to *Liquifarm Agropeucuaria Suiá-Miçu Ltd.*, a subsidiary of the Italian national petroleum company, *Azienda Generale Italiana Petroli* (AGIP, now ENI).

Problematically, the Fazenda Suiá-Miçu coincided with the ancestral territory of the Xavante people, who contested the incursion, first by force, later by subterfuge and finally by civil protest. In 1966, between 200 and 300 individuals were forcibly removed by the Brazilian military to a distant locality that exposed them to migrant populations. At least eighty died from measles. The Xavante continued to resist, however, and as the Indigenous movement crystallised in the late 1980s, they claimed 250,000 hectares of their ancestral homeland within the *fazenda* (see Chapter 11).

The ensuing public relations debacle eventually motivated AGIP to return the land to the Brazilian state during the Earth Summit at Rio de Janeiro in 1992, with the express goal of facilitating creation of the proposed Indigenous reserve. The local bosses of the *fazenda* disagreed with the change in status, however and, in collaboration with local politicians, proceeded to dismember the property. Some sections were sold to large-scale ranchers, but the move also provoked a land rush by small-scale farmers. The *Tierra Indígena Marãiwatsédé* was formally established in 1998, but the area was already heavily deforested and fully compromised by both large and small-scale landholders.

^{*} The reformed fiscal incentives included: (1) Reduction of the corporate income tax (CIT) by 75% for manufacturing facilities located in the Legal Amazon; (2) Exemption of the corporate income tax for the manufacture of digital technology; (3) Reinvestment of 30% of CIT liability for activities classified as a priority for regional development; and (4) Accelerated depreciation of assets. Source: SUDAM.

[†] Value estimated at https://www.historicalstatistics.org/Currencyconverter.

Another ill-fated corporate investment was pursued by Volkswagen AG, whose Brazilian managers convinced its Supervisory Board in 1972 to invest in the Fazenda Vale do Rio Cristalino, a 140,000-hectare estate in the municipality of Santana de Araguaia (Pará). The goal was to create a showcase for modern technology and management practices, while demonstrating support for the military government's development agenda. Instead, it embroiled the company in multiple scandals as environmental and social advocates denounced the German company for industrial-scale deforestation and abhorrent labour practices. ¹³⁹

Volkswagen defended itself by arguing that land clearing was necessary for the production of a strategic food commodity (beef), while claiming that the ranch treated its employees better than any other company in the region. Investigative reporters revealed, however, that the company used external contractors who enticed workers from a labour pool composed of unemployed migrants, mainly *Nordestinos*, who were confined to remote campsites while being charged exorbitant fees for transportation, room and board. The scandal motivated Volkswagen to exit the investment in 1986, but it did not completely divest itself of all related financial assets until 1998. Legal issues were resurrected in 2017, when public prosecutors opened a civil case based on the decades-old charges of slave labour. As of March 2024, the case was unresolved.¹⁴⁰

The Volkswagen scandal revealed an open secret: free land, an exploitative labour system and generous tax credits created a rural economy extraordinarily favourable for large-scale enterprises. Although international corporations were unable to navigate the pitfalls of Amazonian property development, domestic companies feasted on the once-in-a-century opportunity. The largest estates were (and remain) timber properties acquired via the land law rather than the concessionaire system managed by federal and state agencies. Next in size are mega ranches, where the company would first monetise its timber resources, then clear land to plant pastures and raise beef; many now grow soy.

The largest landholdings in Brazil are a legacy of this period. Some are still owned by the founding families (Grupo Roncador, Brascomp Compensados, Martins Agropecuária, and Grupo Triângulo), while others have been acquired by private equity companies based in São Paulo and Rio de Janeiro (Grupo Jari, AgroSB, Grupo Umuaruma, and Grupo Algar). More significant are the thousands of family-owned corporations that acquired relatively large landholdings (1,000 to 20,000 hectares) that form the foundation of the rural economy in Mato Grosso, Maranhão, Tocantins and Pará (see Chapters 3 and 4).

The corporate land rush contributed to social resentment that drove violent confrontations between rural workers and private security services, referred to as *Jagunços*, which have been repeatedly accused of human rights

violations. ¹⁴¹ Conflict was particularly acute in southeast Pará, where largeand small-scale farmers live side by side on a shared landscape (<u>Figure 6.11</u>). The inherent volatility has motivated the government to expropriate 91 landholdings to create INCRA-sponsored settlement projects that span more than 475,000 hectares, providing some 11,000 families an opportunity to acquire a small farm legally.

Corporate investments in palm oil began in the 1970s, when one of Brazil's largest family-owned investment groups, Banco Real (later Con-

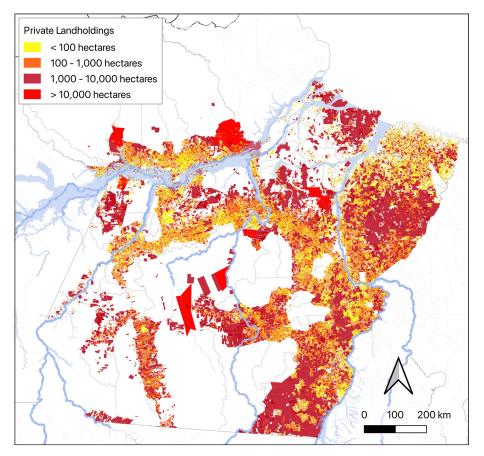


Figure 6.11: The spatial distribution of small, medium and large-scale private land-holdings in Pará. White areas are public lands, including protected areas, Indigenous territories and communal forest reserves managed by INCRA.

Data source: IMAFLORA 2019.

glomerado Alfa), established Agropalma,* which by 2023 was operating 39,000 hectares of oil palm in northeastern Pará. Approximately half of those plantations were established via the direct deforestation of primary forest in the 1980s. The company embraced the concept of sustainability in the late 1990s, however, partly to target European markets willing to pay a premium for deforestation-free palm oil (see Chapter 3). Despite its efforts to improve its reputation, Agropalma has been embroiled in a series of scandals related to the release of liquid waste into rivers and accusations of land grabbing. The company has been accused of purchasing landholdings fraudulently obtained from *Quilombola* communities without adequate due diligence as to the provenance of land titles. 143

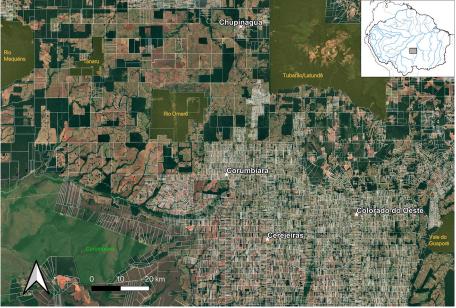
Corporate palm oil doubled in area in the 2000s, when both Petrobras and Vale created subsidiaries to produce palm oil as a biofuel feedstock. Both efforts failed as business ventures, but their plantations, all of which had been established on previously deforested land, were eventually acquired by Brasil BioFuels (BBF). That company now manages 60,000 hectares of oil palm with aspirations of selling feedstock for sustainable aviation fuel (SAF) to a global market, while producing biodiesel for small-scale thermoelectric plants in Rondônia and Roraima. 144

Land distribution favouring corporate interests also occurred in Rondônia, a state famous as home to tens of thousands of small-scale farmers. An area in the southeastern sector of the state, known as Gleba Corumbiara, was set aside by INCRA to distribute approximately 500 estates of 2,000 hectares each to corporate investors from São Paulo. Once the last public lands had been allocated, tensions grew as rural workers attracted to Rondônia by the promise of free land began to occupy *fazendas* that were either fallow or not adequately protected. As in Pará, absentee landholders responded by hiring private security guards (*Jagunços*) while enlisting the assistance of local authorities. The ensuing confrontation is known as the *Massacre de Corumbiara*.

State authorities in Mato Grosso have pursued an even more pro-corporate policy, in part, because the soils are more appropriate for industrial-scale farming, but also because of the influence of agribusiness investors from Goiás and Sao Paulo. Many of the new migrants, who now form the core of Mato Grosso's corporate elite, came from southern Brazil, particularly Paraná. They did not arrive wealthy, but settled in privately

^{*} The Grupo Alfa was owned by Aloysio de Andrade Faria, son of the founder of Banco Real (Clemente Faria), who sold Banco Real to ABM Amro in 1998 for US\$2.1 billion; Andrade Faria used those proceeds to create the current corporate conglomerate, which has been controlled by his heirs since his death in 2020. https://brazil.mom-gmr.org/en/owners/companies/detail/company/company/show/conglomerado-alfa/

Culture and Demographics Define the Present



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Most of the landholdings in Rondônia were distributed as smallholdings ranging from 50 to 100 hectares via the Projeto de Colonização (PIC), except within the area known as the Gleba Corumbiara, where larger holdings, typically ~5,000 hectares, were auctioned to corporate investors in the early 1980s.

Data source: CAR (2020).

organised colonisation schemes that ensured they enjoyed clear legal title that facilitated access to rural credit.¹⁴⁷

The potential of the family corporation is exemplified by two of the state's largest corporate entities, both controlled by scions of the same extended family from São Miguel do Iguaçu, Paraná.* One half of the family (Borges Maggi) controls AMAGGI, which in 2023 owned eighteen *fazendas* covering more than 314,000 hectares, as well as industrial and logistical infrastructure that commercialises its production to clients in Europe and China. Less well known are their cousins (Maggi Scheffer), who control the Grupo Bom Futuro, which owns more than 600,000 hectares in 33 *fazendas*. Decause these are privately held companies, their market value is difficult to know, but AMAGGI reported annual revenues of US\$ 500

^{*} Bom Futuro was founded in 1982 by brothers Eraí, Elusmar and Fernand Maggi Scheffer, who were the sons of Antonio Clarismundo Scheffer and Luzia Maggi Scheffer, the sister of the Andres Antonio Maggi, who founded the Andres Maggi Group (now AMAGGI) with his wife Luiza Borges Maggi in 1977. Source: Oliveira 2022.

million in 2021.¹⁵⁰ This indicates the company would have a market value exceeding US\$ 7 billion, while the land assets of Bom Futuro are probably worth more than US\$3 billion.*

The two locally grown behemoths compete for the title of *Rei da Soja* ('soy king') with an even larger agribusiness giant, SLC Agrícola, which is controlled by the Logermann family of Porto Alegre, Santa Caterina. SLC Agrícola owns more than 320,000 hectares in seven states (about 135,000 in Mato Grosso) and rents an additional 300,000 hectares, pursuing what its managers refer to as an 'asset light' production model. That model is now widely practised by the entire soy sector, because it allows producers to increase cultivated area in an overvalued land market (see Chapter 4). Coincidentally, it funnels hundreds of millions of dollars annually to cattle ranchers, who are using the windfall to renovate their overgrazed and degraded pastureland.

These national champions dominate the farm sector, but logistical supply chains are controlled by multinational commodity giants. The largest, Cargill, initiated its foray into the Amazon when it inaugurated its first silo in Rondonópolis in 1982. Its most controversial investment was its decision in 1999 to a build a grain terminal in Santarém (Pará), at the northern end of BR-163, which linked the industrial farms of Mato Grosso with ocean-going ports on the Amazon Waterway. The other major international commodity companies (ADM, Bunge and Dreyfus) all followed Cargill's lead and were joined by state-owned companies from China in the 2010s (see Chapter 3).

In the Andean countries, the extractive sector has significant power because of the macroeconomic exigencies of their global commodities, but the corporate presence in the agricultural and plantation sector is not particularly pronounced, at least not in comparison to small-scale and middle-class landholders. There are only three large-scale corporate landholders in Ecuador and Peru; all are palm oil companies established in the 1970s and 1980s. Both Ecuadorian firms operate plantations covering a total of 19,000 hectares, while the Peruvian company (Grupo Romero) owns about 40,000 hectares at two localities (See Chapter 3). Bolivia resembles Brazil, where affluent families acquired lands over several decades or centuries, although migration since the 1970s has created a robust smallholder class that now competes for public lands. In Santa Cruz, Bolivia, about a dozen family-run corporations own industrial farms larger than 15,000 hectares, but a much larger area is controlled by mid-sized and small-scale family operations. In the Beni, hundreds of cattle ranches averaging about 2,000 hectares operate on the natural inundated savannas of the Llanos de Moxos (see Chapters 3 and 4).

^{*} Estimates for AMAAGI are based on a price-to-earnings ratio of 15 (similar to its peers), while the calculation of Bom Futuro's land value is based on a mean value of US\$5,000 per hectare.

Vested Interests and Social Tribes

The private sector is the largest single promoter of conventional development. Its lobbying organisations tend to be well funded and staffed with competent individuals grounded in the analytical abilities of traditional economics and the communication skills of public relations professionals. Its members are the quintessential 'vested interests' whose business models rely on access to mineral resources and arable land. They form alliances with labour unions and producer associations that benefit from investments in transportation infrastructure and affordable energy. Most grower associations and business groups have embraced the principles of sustainability, and many participate in high-profile initiatives to improve the environmental and social performance of their sector. Nonetheless, they interpret sustainability within the context of their current production model, which they tend to view as 'essential' to the national economy; consequently, any potential impact is one that must be managed, rather than avoided.

Individuals and corporations join organisations that represent their economic interests; this includes producer associations, landholder syndicates, worker unions, business guilds and chambers of commerce. Some exert influence locally, while others lobby elected officials and regulatory agencies at the national level. The most influential operate within vertical frameworks that communicate the opinions of their base constituency to the higher echelons of the national power structure. Their political influence is directly correlated with their economic power and they form alliances among themselves.

Local and regional actors, particularly commercial and landowner elites in mid-sized cities, play an important role in the expansion and improvement of road networks. In Brazil, for example, local leaders from more than fifteen municipalities have long promoted the improvement of the *Rodovia Transamazônica* (BR-230). In 2010, they extracted a commitment from President Lula da Silva to pave 1,000 kilometres between Marabá and Itaituba. Like many political promises, the highway improvements have yet to fully materialise, but his successor, President Dilma Rousseff (2011–2016), approved construction of the Belo Monte hydropower project, which included funds to build a bridge over the Rio Xingu. President Jair Bolsonaro (2019–2022) celebrated the completion of paving between Itupiranga and Novo Repartimento in 2022 (see Chapter 2).

The same dynamic is now repeating itself via the improvement of BR-319 between Manaus and Porto Velho. Like the *Transamazônica*, this highway was 'opened' in the 1970s during the first stages of the *Operação Amazônia*. The highway was paved initially, but because of the low quality of the pavement, it decomposed within a few years into an impassable dirt/mud track with only limited deforestation along its 700-kilometre extent

between the Amazon River and Humaitá near the border of Rondônia. BR-319 has been significantly upgraded over the past decade, thanks to the efforts of a group of Manaus-based businessmen who organised an association dedicated to its completion (*Associação Amigos e Defensores da BR-319*).¹⁵² The newly elected President Lula made a campaign promise to finish paving the highway in 2022, a policy opposed by Marina Silva, his environment minister. Improving the highway has broad support in both Rondônia and Amazonas.¹⁵³ Because of the highway's remoteness, INCRA did not organize colonisation projects along it during the 1980s and, in the 2000s, the government established protected areas and sustainable-use reserves in the area. The southern sector, near Humaitá, is now a deforestation hotpot, as migrants and land speculators move into the area in anticipation of land rush and settlement boom.¹⁵⁴

In Brazil, agribusinesses exert political power via the *Frente Parlamentar da Agropecuária* (FPA), often referred to as the *Bancada Ruralista*, a multi-party congressional voting bloc formed in the 1980s to protect the property rights of rural landowners at a time when the landless movement was agitating for the redistribution of large estates. *Ruralistas* have expanded their political agenda to pursue pro-development legislation that supports industrial mining in protected areas, hydropower development and road building though wilderness landscapes. In 2023, it was the most powerful voting bloc in Congress, with about 300 deputies in the lower house (out of 513) and 47 senators (out of 81) (Figure 6.12).¹⁵⁵

Perhaps the most significant accomplishment of the *ruralistas* was their campaign in 2012 to modify the Forest Code. Among the features of the 'reformed' regulatory system was an amnesty for property owners who had illegally deforested land before 2008 and a modification of the requirement to reforest portions of landholdings that had exceeded legal deforestation limits (see Chapter 7). In 2019, the coalition's leader, Tereza Cristina Corrêa, joined Bolsonaro's cabinet as agriculture minister, where she implemented policies to strengthen property rights, weaken environmental regulations and promote agricultural exports, ¹⁵⁶ while executing Bolsonaro's policy to defund the delimitation of Indigenous territories. ¹⁵⁷

The *ruralistas* are considered one of a trio of interest groups with exceptional influence over Brazilian politics and represent the base of Bolsonaro's electoral coalition. The popular press calls them *Boi*, *Biblia e Balas* (Beef, Bible and Bullets), a reference to conservative voters who support the expansion of the agricultural frontier, socially conservative evangelical Christians and supporters of law-and-order policies based on aggressive police action. Some voters, such as a gun-toting, God-fearing owner of a small ranch, incorporate all three elements, but others are motivated by a tribal-like affiliation with a particular group that supports politicians who respond to their collective and individual fears. These might include a cul-

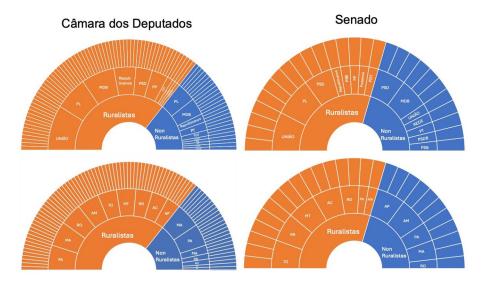


Figure 6.12: The Frente Parlamentar da Agropecuária (Ruralistas) is a multi-party voting bloc in the Brazilian Congress that promotes conventional agricultural development. The graphics show congressional representation in the states of the Legal Amazon in 2023, stratified by political party (top) and state (bottom). The acronyms of the political parties are subject to change with each electoral cycle.

Data source: https://fpagropecuaria.org.br/todos-os-membros

turally conservative evangelical smallholder who dislikes gender-equality policies or an urban resident who supports extrajudicial police operations to fight crime.

Although these coalitions are influential, they are not sufficiently cohesive to control Congress, because their members belong to political parties more interested in transactional politics than ideology. The two-tier presidential election ensures that the chief executive has an electoral mandate, but the proportional system used to elect the lower house of Congress ensures that whoever wins the presidency will be forced to negotiate a legislative agenda (see Chapter 7). In 2023, the coalition backing the Lula administration had the declared support of only 44 per cent of the lower house, of which only thirteen per cent were members of the president's *Partido do Trabalhadores* (PT). His congressional coalition depends on centrist parties with a history of joining whatever coalition is being cobbled together by the election winner. Transactional politics ensure that interest groups like the *Bancada Ruralista* retain veto power over the environmental and social policies needed to ensure conservation of the Amazon (See Chapter 7).

The Precursors of Corruption: Inequality and Informality

One of the principal social and economic challenges facing Amazonian countries is inequality. Although the standard of living of the lower economic strata is better now than at any time in history, tens of millions of people in Amazonian countries are either poor or live on the margin of poverty. Worse still, they face real and palpable barriers to improving their economic situation. The recent pandemic and subsequent economic turmoil have constrained the ability of governments to pursue policies that mitigate inequality via revenue transfers and subsidies and, more importantly, to invest in educational reforms that might change the structural impediments to social mobility.

Poverty in Latin America is a legacy of a deeply stratified society that is a product of class, ethnicity and geography. In Brazil, people of colour from the Northeast (*Nordestinos*) are much more likely to be poorer and less educated than their white compatriots from the South and Southeast.* In the Andes, elites tend to be of European extraction or have a mixed ethnic background and a strong identification with Western cultures, while the less affluent are Quechua or Aymara communities from the High Andes.

In the mid-twentieth century, poverty and inequality led to political instability that spawned socialist and nationalist political movements. Economic experimentation and mediocre governance worsened the situation, and the subsequent economic volatility caused poverty levels to increase over several decades. Entrenched poverty and the lack of opportunity drove millions of people to seek a better life on the Amazonian frontier. The offer of free land was a deliberate attempt to resolve long-standing structural barriers to national development, as well as a convenient policy to deflect dissatisfaction with economic stagnation and social stratification. Perhaps it was coincidental, but the highest rates of migration into the Amazon occurred during the 1980s, the so-called 'lost decade,' when an economic slowdown severely limited the ability of governments to provide solutions to their citizens.¹⁵⁸

Urban areas across the region are characterised by an informal economy that is manifest in street markets and the provision of services by freelance artisans. Unable to find stable employment, these people are forced to make a living by selling goods and services outside the formal economy. They are not criminals, but hard-working men and women who contribute a significant share of national GDP. Moreover, the informal economy is a two-way street where both buyer and seller collude to avoid the costs of taxes and regulation; however, it also eliminates the benefits afforded by labour law and consumer protection.

^{*} Brazil's census asks respondents to self-identify as black, brown, white, yellow or Indigenous.

Most social scientists focus on the urban manifestations of the informal economy, but its tentacles extend into the rural economy. These include small farmers who grow the produce sold at unregulated food markets, paying no taxes on their production or their land. They generally receive no assistance from government extension agencies and lack access to credit from financial institutions. Instead, most rely on predatory agents peddling crop pesticides and loan sharks offering credit with usurious interest rates. As to regulations governing land use and deforestation, they share their urban counterparts' views of permits and licensing fees: the rules are not meant to apply to them, but are intended for large-scale operations.

In the recent past, the lion's share of deforestation has been caused by corporate or large-scale producers;¹⁶⁰ nonetheless, smallholders have caused a significant portion.¹⁶¹ This sector is now responsible for between seventy and eighty per cent of all deforestation in the Pan Amazon, and, although it is only a fraction of the levels recorded in the 1980s, 1990s and early 2000s, it is more than sufficient to cause real and permanent damage to the functionality of the Amazonian ecosystem.¹⁶² In Andean foothills, smallholders routinely clear forest on extraordinarily steep slopes with no consideration as to long-term sustainability or the impact of erosion on infrastructure assets like highways and reservoirs. In some jurisdictions, small farmers may be legally exempt from land-use regulations but, even where laws exist, little effort is made to enforce them.

Similar behaviours prevail among informal gold miners. Here the disdain for environmental impacts is egregious, while mine operators ignore multiple labour and safety standards. In the last few years, there has been an increased effort to collect royalty payments that are allocated to municipal and regional governments. Most miners pay nothing, and those that do are probably under-reporting revenues, while programmes to improve social and environmental performance focus largely on safety rather than environmental liabilities. Not surprisingly, small-scale miners think remediation, mitigation and compensation are intended only for large companies, which are considered 'rich' and usually 'foreign'.

Changing the behaviour of small-scale farmers and miners is a very large challenge. The reasons are multiple, but they are linked to their self-perception of being disadvantaged. In their view, they have achieved what they have because of their hard work, despite being denied a good education or the opportunity for decent employment. Many have paid a 'fee' to obtain title to their landholding or mining concession. In many cases, these documents are not legally valid, but were the only documents they could obtain, because the state does not provide a cost-effective way to formalise their possession.

There are hundreds of thousands of small-scale farmers and miners, which makes elected officials reticent about forcing them to change their

production strategies. Obligating them to change their practices using law enforcement mechanisms will be difficult, because of their electoral power or their ability to disrupt society by civil protest and, in the case of miners, their ability to quickly replace equipment and resume operation after a police raid.

Collective Action, Civil Disobedience and Highway Blockades

The Pan Amazon has a legacy of both violent and non-violent protest that dates from the onset of European colonisation, through the Brazilian Empire and the Andean Republics of the nineteenth century, and is now a significant, often decisive, political tactic in the twenty-first century. In the High Andes, rebellion is the legacy of a large Indigenous population and centuries-long resistance to domination by European and Creole elites. The first armed uprising was organised in 1542 by an Inca aristocrat, Túpac Amaru, but such action became more common in the eighteenth century, when peasants staged more than 140 protests against excessive taxes and forced labour, which culminated in the Grand Rebellion of 1780.* Indigenous troops were essential in the wars for independence at Cuzco (1814) and Charcas (1825), and native uprisings roiled republican governments at Puno (1867), Huaraz (1885) and Chimborazo (1870).¹⁶⁴

In Brazil, Indigenous populations were exterminated, enslaved or geographically marginalised, but the exploitation of *Caboclo* peasants created a climate of resentment that led to the *Cabanagem* revolt between 1835 and 1840, while Afro-Brazilians fleeing enslavement established hundreds of autonomous *Quilombola* communities in the eighteenth and nineteenth centuries. Subsequently, Acre was transformed by the migration of *Nordestinos*, who organised self-governing entities known as *colocações* that allowed them to avoid exploitation by local rubber barons.

A similar dynamic occurred on the Guiana Coast, where enslaved populations rebelled multiple times until slavery was abolished in Guyana (1834), French Guiana (1848) and Suriname (1863). The unwillingness of the newly freed Afro-Guianese to work for their former masters led colonial governments to transport indentured servants from India and the Dutch East Indies; these eventually organised unions and staged labour stoppages to improve their wages and working conditions. ¹⁶⁵

These social phenomena reflected widespread resentment of the systemic inequality that defined the economic and governance systems

^{*} José Gabriel Condorcanqui (known as Tupac Amaru II) near Cuzco, Tupak Katari (and his wife Bartolina Sisa) near La Paz, and Tomás Katari near Charcas (now Sucre) independently mobilised tens of thousands of Indigenous militiamen in response to arbitrary rulings by colonial authorities. Source: Godoy 2015.

of the twentieth century. Subsequent efforts to overthrow the entrenched social and economic system by Marxist insurgencies also failed, first in Bolivia (1967) and Brazil (1967–1974), then in Peru (1980–1999) and finally in Colombia (1970–2015).*

Resistance strategies that adopted the non-violent tactics pioneered by Mahatma Gandhi and Martin Luther King were more successful, but only when they adapted their application to the idiosyncrasies of the Andean Republics and the Brazilian federation. Bolivia, Peru, Ecuador and, to a lesser extent, Colombia are all renowned for the ability of rural populations to blockade highways, disrupt commerce and threaten the survival of elected governments. These tactics were pioneered by *campesino* organisations protesting the unequal distribution of land and the slave-like conditions inherent in the *latifundio* system that predominated in in the first half of the twentieth century.

In Brazil, unequal land distribution is the most salient feature of an inequitable economic system that has driven tens of thousands of landless peasants to invade the property of absentee landholders. Most social movements espouse the tactics of non-violence, but their leaders often exercise only limited control over a multitude of unruly and angry individuals, who react unexpectedly when confronted by security services willing to use armed force to end their acts of peaceful insurrection.

One of the best-known examples of peaceful protest began in 1976, when the newly formed *Sindicato dos Trabalhadores Rurais de Brasiléia* organised a series of non-violent confrontations known as *empates* (literally a stand-off or tie) with land grabbers who were creating cattle farms in the rural workers' communally organised rubber concessions. They succeeded, despite the 1988 murder of Chico Mendes, when the federal government recognised their territorial rights and created a system of extractive reserves (RESEX) in the 1990s (see Chapter 12).

This period was also consequential for the Indigenous movement, which launched its first civil rights campaign, the *Primeira Marcha dos Povos Indígenas*, in 1988. The goal was to pressure the Brazilian Congress, then convened as a Constituent Assembly, to enshrine in the Constitution the right of Indigenous people to territory and cultural autonomy. ¹⁶⁶ These non-violent campaigns succeeded, in part, because they attracted global media attention and support from international celebrities, as well as from Brazilians willing to embrace progressive policies after decades of autocratic rule.

^{*} In Bolivia, Che Guevara's Ñancahuazú Guerrilla; in Brazil, the Guerrilha de Araguaia; in Peru, Sendero Luminoso and the Movimiento Revolucionario Tupac Amaru; and in Colombia, multiple guerilla forces, the largest being the Fuerzas Armadas Revolucionarias de Colombia.

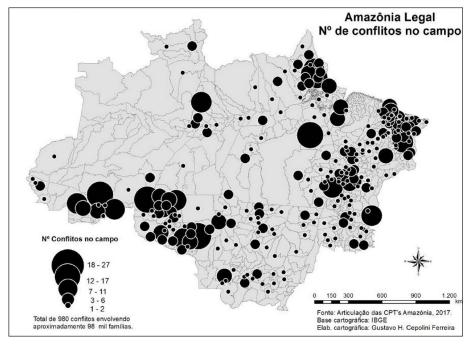
Collective action and civil disobedience have also affected agrarian landscapes in Brazil, where affluent families and landless peasants compete for a diminishing asset: arable land. The *Movimento do Trabalhadores Rurais Sem Terra* (MST) was founded in 1984 following a turbulent decade in Southern Brazil, where landless farmworkers forcefully occupied vulnerable landholdings. Unsurprisingly, land conflict soon engulfed Amazonian settlement frontiers, particularly in southeastern Pará where government propaganda had attracted tens of thousands of *Nordestinos*. Upon arrival, they found the land already occupied by corporations and affluent families, who proceeded to exploit their poverty by trapping them in debt slavery. False promises and exploitation created a volatile environment ripe for civil strife.

Unhappy rural workers occupied dozens of *fazendas* or erected blockades to force authorities to respond to their petitions for free land. Land tenure disputes led to several high-profile massacres in the municipalities of Xinguara (1985), Marabá (1985) Tailândia (1993) Eldorado de Carajás (1996), São Félix do Xingu (2003) and Pau D'Arco (2017). Worse still, individual murders linked to land conflicts were, and remain, commonplace; they are seldom investigated, much less lead to an arrest, conviction and incarceration. ¹⁶⁷ (Figure 6.13)

The landless peasant movement forced the government to establish dozens of INCRA-sponsored *Projetos do Assentamentos*, which are now home to tens of thousands of small farming families (Figure 6.14). These efforts have not satiated the demand for land, however, and families associated with the MST continue to invade private landholdings. In 2020, there were occupations, known as *acampamentos*, in Rondônia (13), Maranhão (12), Pará (11), Tocantins (5), Amazonas (4), Amapá (4), Acre (92) and Roraima (1). Notably absent from this list is Mato Grosso, a metric that reflects state authority's ability to eject squatters before they become established, as well as the political power of affluent landowners intent on protecting their assets. 169

In Bolivia, labour unions associated with the mining industry were the first to deploy civil protest starting in 1919,¹⁷⁰ a tactic that spread to Indigenous communities in the 1930s and 1940s, and which eventually led to the Bolivian Revolution of 1952.¹⁷¹ This bottom-up revolution ended the *latifundio* system in the highlands and enfranchised Indigenous populations throughout the country. Nevertheless, the revolution was coopted by urban elites, who shared power with military regimes in the 1970s or ruled via coalitions of political parties until the mid 2000s.

Despite their newly-minted political rights, *campesinos* and Indigenous peoples continued to be treated as second-class citizens, and governments only responded to their petitions for economic opportunity when they communicated via civic protests. The *campesino* movement was consolidat-



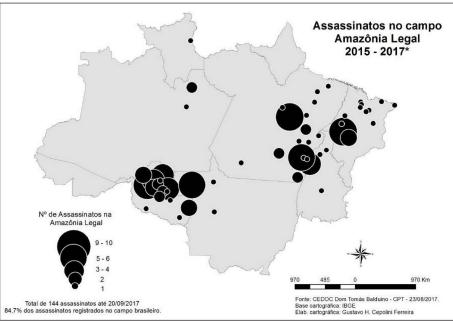


Figure 6.13: Rural violence related to land tenure in the Legal Amazon. Top: Incidents per municipality in 2017. Bottom: Murders committed between 2015 and 2017. Source: CEDOC Dom Tomás Balduino – Comissão Pastoral da Terra (CPT) 2017.

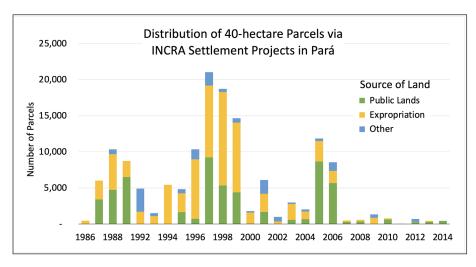


Figure 6.14: INCRA created 670 Projetos de Assentamento totaling more than 7.5 million hectares between 1986 and 2013 via the distribution of individual parcels to families within communally organised agrarian settlements. These numbers do not include approximately 7 million hectares distributed prior to 1984, when INCRA distributed land to individual smallholders via Projetos de Colonização.

Data source: INCRA 2020.

ed in 1979 into the *Confederación Sindical Única de Trabajadores Campesinos de Bolivia* (CSUTCB), which increasingly blockaded the country's limited highway infrastructure as a bargaining tactic. Their demands have evolved over time, starting with an end of military rule in the late 1970s and later encompassing opposition to austerity policies and market reforms in the 1990s. Their demands have always included access to land and the formalisation of land rights (see Chapter 4).

Highway blockades became a political tactic during the *Guerra de Agua* (1999), when both urban and rural populations protested against the proposed privatisation of agencies providing water services. Similarly, the *Guerra de Gas* (2003) killed investor interest in pipelines that would have exported hydrocarbons via Chilean ports. Both phenomena triggered a wider debate about the privatisation of national companies and the role of foreign corporations in the exploitation of natural resources. ¹⁷² The fusion of highway blockades and electoral politics was completed when Evo Morales won the presidency and a congressional majority in 2005 that allowed him to change the constitution and re-found Bolivia as a plurinational socialist state.

Morales soon charted a course of action that brought him into conflict with lowland Indigenous communities opposed to policies that would distribute public lands to highland Indigenous migrants, now known as *Interculturales*. Rather than blockade highways, however, the lowland In-

digenous nations, represented by the *Confederación de Pueblos Indígenas de Bolivia* (CIDOB), voiced their demands for territory by marching peacefully from their territories to the nation's capital (La Paz). Their tactics preceded the rise of Evo Morales by more than a decade, starting in 1990 when CIDOB organized the first of eleven marches, which typically occur when the Bolivian Congress is considering a change in laws that might impact their territorial rights. In 2011, their eighth pilgrimage to La Paz was organised to oppose the government's plan to construct a highway through the middle of *Territorio Indígena y Parque Nacional Isiboro Sécure* (TIPNIS). Rather than hear their petition, however, Morales sent police to intercept the marchers in a failed attempt to disrupt the lawful exercise of their civil rights.¹⁷³ Ironically, Morales was forced to resign as president by a general strike and transportation blockade after he was implicated in a scheme to steal the general elections of 2019.¹⁷⁴

The use of blockades as a protest tactic spans the political spectrum, and the *Comité Cívico de Santa Cruz*, a conservative organisation controlled by regional elites, has used transportation strikes over five decades to negotiate increasing levels of autonomy. Local governments, elected officials bound by law, now use illegal highway blockades to pressure regional and national governments for investment in roads, schools and health-care facilities. In 2023, there were 146 highway blockades in Bolivia between January and August; their efficacy in obtaining results has obviated normal means for petitioning governments. ¹⁷⁵

Peru is not unlike Bolivia, but rather than channeling popular discontent into (relatively) peaceful civil protests, the nation was engulfed by two decades of guerilla war in the 1980s and 1990s. Prior to that violent era, Peru's highland Indigenous people were represented by peasant organisations, which coordinated the actions of regional syndicates organised by local communities that leveraged centuries of Indigenous traditions in self-governance and resistance. The *Confederación Campesina del Perú* (CCP) was created in 1947 and played a major role in forcing the agrarian reform that was eventually promulgated by the military regime of Gen. Juan Velasco Alvarado in 1969. The CCP was joined in 1979 by the *Confederación Nacional Agraria* (CNA) in 1979, which promoted leftist ideologies during a constitutional government dominated by market-oriented political parties.

Both the CCP and the CNA were rendered irrelevant during the Marxist insurgencies of the 1980s and 1990s, when locally organised self-defence militias (*Rondas Campesinas*) were incorporated into President Alberto Fujimori's successful strategy for defeating *Sendero Luminoso* and the *Movimiento Revolucionario Tupac Amaru* (MRTA). ¹⁷⁶ The old-guard campesino federations recuperated some of their influence in 2000 when Fujimori learned that his nation was not willing to tolerate gargantuan levels of greed and graft, while the self-defence militias evolved into local civic groups that now coordinate

their activities via the *Central Única Nacional de Rondas Campesinas del Perú* (CUNARC-P). All three federations periodically demonstrate their power by organising national road blockades that paralyse the country.

Peru's campesino organisations have broad political agendas, but they (apparently) have not addressed the specific needs of communities impacted by the mining industry, particularly the forced expropriation of land and the arbitrary appropriation of water rights. The *Confederación Nacional de Comunidades del Perú Afectadas por la Minería* (CONACAMI) was founded in 1999 to coordinate local-level protests against mining projects and was soon engaged in a public relations war with some of the world's largest mining conglomerates.* Perhaps its most successful action was to support an Indigenous woman who refused to sell her land to a mining company seeking to install a massive gold mine in the Cajamarca region.† Civil protests, mainly highway blockades, have paralysed billions of dollars in investment, including by Chinese firms unaccustomed to dealing with social and environmental issues. The ongoing social protests have placed the mining sector's expansion plans in doubt and threaten the long-term future of the mining industry in Peru.¹⁷⁷

Agrarian reform and economic justice have long dominated the policy agendas of the *Campesino* federations in Peru, and their rhetoric often skews towards Marxist philosophies that emphasise class struggle. In contrast, ethnic identity and territorial control are the overriding concerns of the Indigenous communities in the Amazonian lowlands, which have also organised into two federations with (slightly) different philosophical approaches. The *Confederación de Nacionalidades Amazónicas del Perú* (CONAP) and the *Asociación Interétnica para el Desarrollo de la Selva Peruana* (AIDESEP) essentially compete to safeguard the collective rights of Indigenous peoples in the Amazonian lowlands. ¹⁷⁸ Both organisations were created during the same week in August 1980, and both seek to incorporate representatives from the self-governing councils of Indigenous communities (*Comunidades Nativas*) that have obtained, or are seeking, communal title to the lands surrounding their villages (see Chapter 4).

CONAP tends to leverage development opportunities by working with national and regional authorities, while AIDESEP has a more adversarial attitude and operates more like a non-governmental organisation

^{*} Yanacocha (Newmont), Las Bambas (MMG), Cerro de Pasco (Glencore), Tintaya (Glencore), Antamina (BHP); see Chapter 5.

[†] Máxima Acuña refused to sell her property for the installation of the Conga project. The Buenaventura Mining Company evicted her and a regional court convicted her of trespassing. She appealed the decision, was exonerated and recovered her property rights. The Newmont Mining Corporation was forced to abandon the Conga project after investing hundreds of millions of dollars. See Chapter 5.

(NGO). Both federations will condone, or actively organise, acts of civil protest to further the goals of their constituencies. Both were involved in the Peruvian Amazon's most notorious civil protest, when more than 1,000 men and women gathered near the town of Bagua in 2009. Their objective was to disrupt the operations of the Oleoducto Norperuano and block the only highway in that part of Amazonian Peru to protest policies that would have opened the Peruvian Amazon to international investment and, in their view, threatened communal property rights. Chief among their complaints was the abrogation of the legal requirement for the government and its development partners to obtain the 'free, prior and informed consent' (FPIC) of Indigenous communities before implementing development projects that would affect their communal rights.*

The policies were part of a strategy by President Alan García (1985–1990, 2006–2011) to catalyse economic growth via a free-trade agreement with the United States, which had taken effect in February 2009, and he dispatched several hundred police to end the highway blockade. In the resulting armed confrontation, now known as the *Baguazo*, more than 200 individuals were injured while ten civilians and 23 police officers were killed, and one police officer remains missing and is presumed dead.¹⁷⁹

Fifty-three people, including the president of AIDESEP, were charged in connection with the violent incident. All were acquitted in a six-year trial that ended in 2017, when a judge ruled the accused were acting within their rights to protest against a crime against the environment. The sentence was upheld by the Supreme Court in 2021. ¹⁸⁰ The *Baguazo* forced the government to table the controversial package of proposed laws that had triggered the protest. It also led to the passage of the Law on Prior Consultation of Indigenous or Original Peoples (2011) and a new Forest and Wildlife Law, which was debated not only in Congress but also through a prior consultation process in 2015. Importantly, the incident created a political environment that has undermined oil exploration and production in the Peruvian Amazon. Ironically, the free trade agreement itself was unaffected by the *Baguazo* and remains in place as of 2024.

In Ecuador, the use of civil protest also stems from the country's history of Indigenous people's struggles for land and water. Although local groups and associations were instrumental in forcing an agrarian reform in the 1960s, they did not fully exercise their political power until 1990, when the *Confederación de Nacionalidades Indígenas del Ecuador* (CONAIE) organised a national strike that shut down the country. This was followed

^{*} The principal of FPIC implicitly recognised by the Constitution of 1993 and was explicitly stated as legal obligation by International Labor Organization Convention 169 of 1989, which Peru ratified in 1995. Nonetheless, the regulatory protocols that specified how FPIC was to be implemented had not yet been defined by the Peruvian state.











 $Top\ left: @\ Phanga\ Media/\ Shutterstock; Top\ right: @\ Thomas\ Quiryman\ and\ Marijke\ Deleu;\ Centre: @\ CIPCA-Centro\ de\ Investigación\ y\ Promocin\ del\ Campesinado;\ Bottom\ left: @\ Diego\ Sugoniaev/Shutterstock;\ Bottom\ right: @\ Joa\ Souza/Shutterstock$

Civil disobedience is a common tactic used by social movements to coerce action from authorities. In the Andean republics, highway blockades are used to protest the inadequate provision of public services or force governments to suspend certain policies. Top left: Traffic obstacles near Puya, Ecuador; Top right: Highway blockade at Bagua, Peru; Centre: The Marcha Indígena por el Territorio y la Dignidad, Bolivia; Bottom left: Urban protest in Quito in support of Indigenous rights; Bottom right: Rural workers invade landholdings deemed to be illegal or illegitimate in Brazil.

by a peaceful march in 1994 by the *Confederación de Nacionalidades Indígenas de la Amazonía Ecuatoriana* (CONFENIAE), which formalised its demand for territorial justice and an end to the flagrant violation of environmental norms by the petroleum industry. Since then, Indigenous organisations have relied on legal strategies to advance their fight to limit oil production in their territories (see Chapter 5). In August 2023, a national referendum on a measure to limit oil exploitation in Yasuní National Park, sponsored by a coalition of Indigenous and environmental organisations, was approved by an overwhelming majority of Ecuadorian voters.¹⁸¹

Civil protests occur in Amazonian Colombia, but they pale in comparison to the decades of abuses linked to the civil war. The absence of the state, a central feature of that war, essentially precludes civic protest, for the simple reason that non-violent protests are useless in an environment dominated by war. Land conflicts in Guyana and Suriname are more often limited to political events, such as stolen elections or a demand for an end to an authoritarian government, and have not played a role in effecting change from a recalcitrant government, as they have in the Andean Republics.

A Taxonomy of Stakeholder Groups

The Amazon is renowned for its cultural diversity, particularly the ethnic diversity of its Indigenous nations, but also the cultural traditions of numerous other distinctive groups that have migrated into the Amazon over five centuries. The region's demographic history reflects that of its constituent nations, all of which are an amalgam of Indigenous people who have interbred, to varying degrees, with immigrants from Europe, Africa and Asia. This complex genetic history has been moulded by social, economic and political phenomena that have further differentiated the populations into a diverse assemblage of social groups. Knowing how people self-identify and view each other is essential when trying to understand how those cultural legacies influence the trajectory of Amazonian development.

Traditional communities

Social advocates and academics use this term to describe families with livelihoods that are highly dependent upon forest and aquatic resources. Their reliance on natural ecosystems is an integral part of their cultural tradition, and most view themselves, and are viewed by others, as stewards who will conserve forest resources for future generations.

Indigenous nations. There are more than 340 Indigenous groups in the Pan Amazon that self-identify with a specific ethnic lineage. Those with the strongest cultural identity continue to speak their native language and reside within territories they view as their ancestral homeland. This number includes communities that have experienced

various amounts of cultural loss and/or modification of their cultural traditions, as well as urban dwellers who retain their ethnic identity while partially joining a different stakeholder group (urban proletariat or urban professional). They are present in all nine Amazonian jurisdictions and continue to fight for their cultural traditions and ancestral lands (see Chapter 11).

Ribeirinhos/ Ribereños. This social group resides on the main trunk of the Amazon River or one if its major tributaries (Tapajós, Xingu, Solimões, Negro, Madeira, Marañón, Ucayali, Huallaga). As their name implies, they rely on the natural resources of floodplain habitats, and many cultivate gardens for basic food crops. In Brazil, their cultural legacy began as detribalised Indigenous people in the eighteenth century and Caboclo settlers in the nineteenth and twentieth centuries. For some, their territorial rights have been formalised by the creation of sustainable use reserves (RESEX, RDS, PAE). In Peru, most are detribalised Indigenous people who survived enslavement and persecution during the first rubber boom; their legal rights to forest and aquatic resources have yet to be legally recognised. In both countries, many urban residents are local migrants originating from these communities.

Seringueiros/Castañeros. These are descendants of rubber tappers, who pursue subsistence livelihoods in small forest communities. Most are descendants of men and women who migrated into the southwestern Amazon during the first or second rubber boom. In Acre and adjacent areas of Amazonas and Rondônia, in Brazil, they represent the third or fourth generation of *Nordestinos* and their use-rights to forest resources have been formalised in extractive reserves (RESEX, PAE). In Bolivia's Pando and Peru's Madre de Dios region, most are descendants of detribalised Indigenous people; many have been granted concessions to forest holdings either individually (Peru) or as cooperatives (Bolivia) and now self-identify as *Castañeros*, or Brazil nut collectors.

Quilombolas/Maroons. These are descendants of transported Africans who escaped their enslavers in the nineteenth century. In Brazil, they share landscapes with and pursue livelihoods similar to those of *Ribeirinhos*. In Suriname and French Guiana, their livelihoods are less linked to river habitats and depend more on subsistence agriculture. Some also work in small-scale gold mining.

Small Landholders

The most numerous stakeholders in the rural Amazon are descended from settlers who migrated into the region after 1960. Defined by the size of their parcels, typically between forty and a hundred hectares, these family farmers own standalone properties or have permanent use rights within a communal landholding. Most have occupied their plots since the early stages of frontier development, but only a few have managed to formalise their land tenure (see Chapter 4). Historically, they have been a major source of deforestation in all Amazonian countries; production systems vary among regions, reflecting the diversity of soils, climate and tradition, as well as access to technology and markets.

Agricultores Familiares. In Brazil, small farmers tend to be Caboclos, and many, but not all, are Nordestinos. Some occupy the hundred-hectare properties created by the Projeto Integral de Colonização (PIC) in the 1970s, while others reside in forty-hectare parcels located within the Projetos de Assentamentos (PA) established during the 1980s and 1990s. Significant numbers have appropriated public land opportunistically when and where it was available. Smallholders are ubiquitous throughout the Legal Amazon, but they dominate the physical, social and political landscape in Rondônia and selected municipalities southeastern Pará. They produce a significant proportion of regional food staples (beans and farinha), and a few cultivate perennial cash crops, such as coffee and cacao; many, perhaps most, become livestock producers as pasture displaces cropland due to a lack of investment and access to technology.

Colonos/Campesinos/Interculturales. In the Andean Republics, small farmers occupy the largest spatial area and dominate the political landscapes of the Andean Amazon. Most have an Indigenous legacy, many speak Quechua or Aymara, but this group also includes individuals who self-identify as Mestizo. Almost all have migrated into the region from rural communities in the Andean Highlands where they are referred to as Campesinos. As pioneers, they have referred to themselves as Colonos or Colonizadores, an epithet now viewed unfavourably in Bolivia where the term Interculturales has gained currency. The new term, which was coined by social activists and academics, allows these migrants to retain their identity as Indigenous people while occupying landscapes where they are not native born. They are major producers of basic food staples, but also cultivate numerous cash crops, including coffee, cacao, oil palm and, of course, coca leaf.

Mennonites. Members of this religious faith first immigrated into the Bolivian Amazon in the mid-1970s and have since expanded their presence to cover more than one million hectares with a population estimated at about 100,000. Families own individual properties organised into self-governing colonies that have been established on large estates purchased from land speculators. Although their prop-



Mennonite colonies are organised around individual congregations, where members pool their capital to purchase a large landholding that is subsequently divided among congregants. Individual landholdings are small, typically 100 hectares, but since most families pursue intensive production strategies, their colonies tend to be among the most homogenous and least diverse of all Amazonian landholders.

erties are small and their cultural heritage eschews many aspects of modern society, most use sophisticated technology to cultivate cash crops and raise livestock, while growing food for home consumption. Most have large families, which drives expansion into the forest frontier in Bolivia, particularly in Chiquitania; in the last decade, new colonies have been established in Amazonian Peru and on the Llanos de Orinoco in Colombia.

Wildcat Gold Miners. A diverse category who lay claim to small parcels on landscapes experiencing a gold rush, most notoriously within Indigenous territories and protected areas. Unlike their agriculturally oriented peers, they are not interested in obtaining title to a rural property, but a transient right (concession) to exploit mineral resources owned by the state. They operate in all nine Amazonian jurisdictions with little regard for the law, ignoring regulations governing mineral rights, environmental management, labour relations and tax compliance. Eventually, they exhaust the easily exploitable gold in their parcel and either move on to a new gold rush or migrate to an urban area.

Cattle Producers

Ranchers control more land in the Amazon than any other group. Rather than being defined by the size of their landholdings, however, they are recognised by their production system and its associated 'cowboy' culture. They include a diversity of producers with landholdings that range from several hundred to many thousands of hectares.

Large-Scale Family Ranchers. The stereotypical cattle rancher in Brazil, Bolivia and Colombia is a medium- to large-scale producer raising beef cattle on landholdings with a mosaic of cultivated pastures and remnant forest. Many are descended from pioneers who settled – and deforested – frontiers that have evolved into consolidated landscapes. They tend to be culturally conservative and hold conventional attitudes toward development. Sophisticated ranchers use credit and technology to increase productivity and improve their sustainability, while the less enlightened overgraze pastures and degrade the soil (see Chapter 3).

Small-Scale Cattle Producers. Smallholders also produce beef, particularly on the agricultural frontiers of the Andean Amazon where shifting agriculture has created a massive stock of pasture that a few landholders have consolidated into beef and dairy operations. Cattle production at this scale is common throughout the Brazilian Amazon, particularly in Rondônia, eastern Pará and northern Mato Grosso,

where small landholders embrace a cultural lifestyle that venerates cattlemen and cowboys.

The Corporate Sector

Companies exercise vast power over the political economy at the national, regional and local level. Most are domestic corporations owned by affluent families operating within the framework of a dysfunctional legal system that fosters a cynical attitude grounded in self-interest. Many pursue business opportunities in multiple sectors, including in urban and rural markets, as well as across different production systems. A few have transitioned into publicly owned corporations that raise capital in their nation's capital markets.

Agribusiness. The most dynamic group of businessmen in the Pan Amazon are the industrial-scale farmers producing food commodities for global markets. They typically use monoculture systems that maximise yields and profits. In Brazil and Bolivia, they produce soy, maize, sorghum, cotton and other row crops, while in Colombia, Ecuador and Peru they are more likely to grow perennial tree crops, such as oil palm or coffee. The scale of their operations, and their profits, is influenced by the commodity: row crops and plantations tend to be large-scale operations, while coffee is very difficult to cultivate at large scales.

Timber Sector. These companies harvest timber from land that belongs to somebody else, either through concessions from the state (Peru, Pará, Amazonas), contracts with private landholders (Mato Grosso, Bolivia) or illegal operations using third-party contractors (Rondônia, Bolivia, Peru, Colombia). Most commercialise their harvest in domestic markets, where concerns about sustainability are nonexistent or easily circumvented. A few seek to maximise their earnings by specialising in foreign markets that demand evidence that their practices are sustainable.

Extractive Sector. Multinational corporations operating enormous openpit mines or complex oil and gas fields garner most of the public's attention, but this category also includes state-owned oil companies and 'junior' gold miners operating on landscapes shared by wildcat miners. The sector provides economic opportunity to hundreds of medium- to small-scale service providers that employ hundreds of thousands of technicians and professionals. Many embrace the language of sustainability, even though they are exploiting a nonrenewable resource, while supporting the conventional economic models upon which their livelihoods depend.

The Coercive Powers of the State

The state is, or should be, a vitally important actor on the forest frontier. When they are present and effectively execute their tasks, state agencies can make an enormous contribution to avoiding or resolving conflicts among diverse stakeholders. Advocates for forest conservation often speak of the need, or the potential, for law-and-order solutions to the many challenges related to deforestation. Unfortunately, state representatives are seldom present with sufficient power to influence events, or they exacerbate situations because of their proclivity to tolerate corrupt practices. Many hold conservative views on social issues and conventional views on development.

Military. Much of the Amazon is located near a foreign border and, although the threat from neighbouring governments is nonexistent, criminal elements use wilderness areas to organise illegal activities. The armed forces routinely assist elected officials and judicial authorities to enforce the law throughout the Pan Amazon. Military involvement in civilian affairs is also an unfortunate legacy of each country's recent past. They exert influence at the national, regional and local level and, although their power is constitutionally limited, they still express their opinions and influenced the national debate on development. For example, they almost uniformly support road construction.

Police. The police are one of the most problematic institutions in Latin America. They have a well-earned reputation for corruption and abuse, and consequently lack the respect of the communities they are constitutionally charged with serving. Part of their negative legacy stems from a recruitment process that favours nepotism, which has created a clannish group that is socially isolated from other sectors of society. Despite their multiple flaws, they are essential for effective governance and are particularly critical for establishing the presence of the state in pioneer landscapes.

Prosecutors (Spanish: Fiscales; Portuguese: Promotores/Procuradores). The proactive measures essential for law enforcement are the domain of prosecuting attorneys. Police cannot intercede to stop illegal actions without an order from a district attorney, nor can a judge issue a ruling unless a prosecutor brings a case before the court. Prosecuting attorneys have enormous power in dysfunctional legal systems where an indictment can take a decade to resolve, and which consider the defendant guilty until proven innocent. Peru and Brazil have harnessed these powers to fight environmental crimes by creating specialised prosecutors who lead joint operations with police, tax

authorities and environmental authorities to combat illegal logging, land clearing and gold mining.

Judges. Environmental crimes are adjudicated by a judge who also has the power to dismiss the case or emit a ruling based on evidence and law. They can imprison or release the defendant pending trial. These powers have been used to dilute the potency of environmental laws, particularly for influential or affluent defendants who 'convince' judges to delay court cases for years and, in the interim, avoid paying fines.

Criminal Mafias

The Amazon is often portrayed as an anarchic frontier where fraud is viewed as a customary business practice and violence is widespread. These are, perhaps, exaggerated elements of a frontier society, but they accurately describe criminal gangs that openly defy the power of the state and prey on citizens unable to protect themselves. These come in several permutations, typically associated with a specific illegal activity.

Drug syndicates. The most infamous are the Colombia gangs that have focused the attention of governments and movie makers for decades, as well as their erstwhile collaborators descended from Marxist guerillas or right-wing militias. Similar cocaine-fueled mafias operate in Bolivia, Peru and Ecuador, where they have infiltrated the judicial and political spheres; most have commercial ties to the urban mafias that control the drug trade in Brazil. All these criminal syndicates communicate with and commercialise their production via equally powerful and sinister consortia in North America, Africa and Europe.

Sindicato Mineros. The gold fields of the Amazon are generating billions of dollars annually, by mining a global commodity that dwarfs the monetary return of conventional and sustainable businesses. There are sporadic reports that drug cartels are also involved in organising or controlling the illicit activities in the gold fields. This would appear to be untrue or exaggerated, however, as the gold fields are occupied by fiercely independent individuals who have organised their illegal networks internally from the ground up. They collaborate to sell their gold overseas, perhaps with the assistance of the drug syndicates that use gold markets to launder their ill-gotten gains, military officers (Venezuela), or via merchants commercialising mercury, a loosely regulated mineral that is acquired through a black market that originates in Bolivia (see Chapter 5).

Land grabbers. Frontier societies are renowned for lawlessness and impunity, particularly when it pertains to land tenure, where the adage

'possession is nine-tenths of the law' reigns supreme. Unscrupulous individuals forge documents and forcefully occupy public lands or expel less powerful landholders with ill-defined or communal land tenure rights. Known as *grileiros* in Brazil, they employ lawyers to process the paperwork while deploying thugs, known as *Jagunços*, to occupy and clear the land of previous settlers. The same phenomena occur in Spanish speaking countries, where the bosses are known as *traficantes de tierra* and their ruffians are ominously referred to as *matones* (see Chapter 4).

Civil society and religious organisations

The weakness of the state has highlighted the importance of non-governmental organisations (NGOs) that provide health and educational services, while acting as advocates for democracy, environmental conservation and social justice. As a group, these provide a moral counterweight to many of the forces that make frontier societies unfair, representing both conservative and progressive viewpoints that reflect the diversity of Pan Amazonian society.

The Catholic Church. The oldest non-governmental organisation has a long tradition of working with marginalised communities. The Catholic religion is deeply imbued with a social mission to assist the poor, and the Church has spawned innumerable charitable works supported by an international network of donors, priests, bishops and religious men and women, as well as the participation of the communities they serve. The Church simultaneously represents progressive and conservative parishioners. It often acts as a partner of the state and has contributed to a cultural legacy open to objective criticism.

Evangelical churches. The Pan Amazon has long been the object of missionary activity on the part of Christian churches that compete for the affection of the faithful, including both mainstream Protestant churches and fundamentalist sects commonly referred to as Evangelicals. The latter attained prominence, first by their missionary activities among Indigenous communities (1920–1980) and later by their success in attracting millions of the urban and rural poor. Evangelical pastors and their flocks tend to be socially conservative and have formed political coalitions with economic actors that some observers describe as reactionary.

Environmentalists. The stereotypical view of a non-governmental organisation in the Pan Amazon is one dedicated to environmental issues. Originally focused on biodiversity conservation, they now have a diversified policy agenda that includes protecting ecosystem services and addressing multiple aspects of climate change, particularly the fight against deforestation. Although most are local grassroots

organisations, many have links with international NGOs and form alliances with social advocates and Indigenous organisations.

Social advocates. Many stakeholders in the Pan Amazon form part of a culturally conservative, patriarchal society; however, transformative change is underway particularly as social media impacts life and social mores in the region. Unlike the environmental advocates, who have strong support from private organisations, these groups rely more on support from multinational or binational development organisations. Traditionally, they have focused on economic justice and women's rights, but are increasingly addressing broader gender issues.

Urban society

The urbanisation of the Amazon has empowered stakeholder categories that are often overlooked when describing the social and economic actors who will decide the fate of the Amazon Forest and its natural ecosystems. They overlap with many of the previously described stakeholder groups, but they merit special attention because of their demographic dominance.

Professional elites. A highly educated cohort, including physicians, lawyers, engineers, accountants, economists, managers, educators and others with a university education. Most come from middle-class families, but they also include individuals who have improved their social and economic status by hard work and perseverance. Many, perhaps most, support environmental causes and social justice while living conventional lifestyles.

Entrepreneurs. Influential individuals who create jobs and drive economic growth, with educational and social backgrounds similar to those of professionals, including both upper and lower middle-class cohorts. They have more influence, however, because of their power and prestige as successful businessmen and women. They tend to be socially conservative and committed to conventional economic models, but will pursue 'green' business models – if they are lucrative.

Functionaries. A cadre of individuals with varying educational backgrounds who provide administrative and technical services in both the private and public sectors. In the private sector, many have obtained their jobs because of familial or social contacts, while in the public sector those advantages are often accompanied by political patronage.

Proletariat. The largest cohort of individuals and families in the Amazon. They include tens of thousands of blue-collar workers in the construction trades, manufacturing industries and service sector, as well as the rural families who have established a second home in an urban centre to ensure their children have access to secondary education.

The Cultures of Corruption

Journalists typically treat corruption as an issue of governance; dishonesty, however, is not an attribute of constitutional and legal structures, but of the behaviour of individuals. Moreover, corruption transcends public institutions and infects private entities, while NGOs must also contend with financial fraud and unethical conduct. Too often, individuals who are fundamentally honest are induced to act unethically: they may be pressed for time, desperate to resolve a problem, or simply take the path of least resistance. Most people behave ethically in their day-to-day interactions with colleagues, friends and family but, if they believe a system has been corrupted, they are more likely to tolerate fraudulent behaviour and, unfortunately, participate if the opportunity arises or necessity dictates an unethical choice.

People forced to live in an environment defined by dishonesty are fully aware of its impacts and exigencies, which fosters a culture of distrust, selfishness and cynicism. Corruption in all its manifestations, and there are many, is a massive impediment to sustainable development because it undermines the social contract between the state and its citizens, while distorting the economic leg of a three-part development paradigm.* The citizens of the Pan Amazon are dissatisfied, even disgusted, with the status quo; unfortunately, they have been unable to discover a pathway out of their predicament.

The Diversity of Venality

The stereotypical corruption scandal involves the embezzlement of public funds by a government functionary, such as a mayor, governor, cabinet minister or head of state; however, there are many different types of dishonest behaviour that infect public and private transactions. Historically, the largest source of graft in the Amazon has been the plundering of its natural resources, particularly its land, timber and minerals; to a certain extent, this was the official policy promulgated by governments promoting the so-called colonisation of the Amazon. Times have changed, however, and even larger sums of money are transferred via kickbacks associated with construction projects for highways, hydropower plants and railroads, as well as schools, hospitals and other basic infrastructure.

Some view kickbacks, a type of corruption commission, as less obnoxious than outright embezzlement, arguing that at least society benefits by the construction of an infrastructure asset useful to the region's inhabitants. The fallacy in this logic is obvious: corruption distorts investment decisions

^{*} Sustainable development has three axes of action: economic, environmental and social

because projects are not subject to genuine due diligence, which allows vested interests to collude with crooked politicians to build things that are either not a priority or completely unnecessary, or which are shoddily built or use poor materials.

Corrupt practices are hidden by subterfuge, so it is difficult to document the real levels of corruption that plague a country, which is why academics who study corruption rely on the opinion of individuals in a position to observe acts of malfeasance. The most widely cited metric is the *Corruption Perception Index* (CPI), which is compiled from a survey that queries multilateral officials and business executives regarding levels of (a) bribery, (b) diversion of public funds, (c) use of public office for private gain, and (d) nepotism in the civil service. Starting in 2017, Transparency International, the curator of the CPI, included a fifth element: (e) state capture, which describes when a select group of individuals (oligarchs) or entities (criminal mafias) monopolise government actions.¹⁸²

The CPI ranks countries based on a scale of 0 (most corrupt) to 100 (least corrupt); unsurprisingly, the countries of the Amazon rank poorly (<u>Figure 6.15</u>). Corruption encompasses many types of behaviour (bribery, extortion, nepotism, self-dealing), which can subvert multiple publicly funded activities (building infrastructure, contracting personnel, procurement of goods and services, regulatory enforcement and licensing), while spanning multiple sectors (justice, tax, land tenure, health systems, natural resources) and jurisdictions (national, regional, local). ¹⁸³ Statistical metrics, such as the CPI, mask this complexity and inadvertently reinforce the pub-

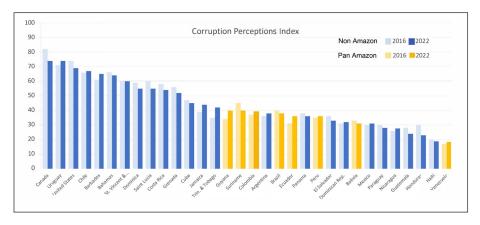


Figure 6.15: The countries of the Pan Amazon score poorly on the Corruption Perceptions Index (CPI), a ranking based on surveys that query individuals at multilateral institutions and business consulting groups (high scores = less corruption).

Data source: Transparency International 2022.

lic conception that it is a generic problem that can be resolved by electing better politicians or improving law enforcement. Surveys fail to capture sophisticated modern forms of corruption, particularly in the category of quasi-legal bribes camouflaged as campaign contributions, or when 'state capture' occurs via legal means, such as an election. One recent approach to improve our understanding of corrupt behaviour proposes using a logical framework to better understand who is involved and the magnitude of the impacts of different types of unethical transactions (<u>Text Box 6.3</u>).

This unbundled approach identifies the most common manifestations of corruption in Amazonian societies: paying a bribe to avoid a traffic fine or a 'propina' to advance a bureaucratic procedure. These seemingly innocuous habits, however, are symptomatic of a rotten system where powerful individuals embezzle money or rig the system via a quasi-legal payment or non-transparent exchange of information to ensure a desired outcome. All four types of corrupt behaviour persist because they exist within long-established permission systems that assume 'everybody does it'.

Another widespread form of petty corruption occurs when societal connections or political patronage are used to obtain employment. Academics refer to this as a patronage system, which is characteristic of new democracies that have yet to successfully organise a nonpartisan civil service. Referred to as *clientelismo* or *padrinazgo*, the phenomenon is common

Text Box 6.3: The Unbundled Corruption Index

The Unbundled Corruption Index (UCI) employs a 2x2 contingency table to classify types of malfeasance into four categories that distinguish among

| | Non-Elites | Elites |
|-----------|---|--|
| Theft | Petty theft Extortion by low-level bureaucrats or police; often instigated by a citizen offering to pay a bribe to avoid a penalty or fine. | Grand theft Embezzlement by high-level authorities in collusion with private actors; often by making payments to ghost employees or fictional companies. |
| Exchanges | Speed money Payments by citizens to bypass rules, avoid taxes or obtain a licence; often insti- gated by functionaries who cynically prolong administra- tive procedures. | Access money Payments by businesses to officials to win contracts, influence policies, or facilitate access to natural resources; sometimes disguised as campaign contributions. |

as an entryway into the professions of policemen, clerks, maintenance staff, managers, postal workers, health care providers and other civil service positions that can provide a middle-class lifestyle.

A seemingly minor societal shortcoming, which many view as a feature rather than a flaw, patronage systems have deleterious long-term consequences by contributing to institutional mediocrity. Although commonly associated with political affiliation, patronage systems also use class and ethnicity as determinants of opportunity – or, more precisely, the lack of opportunity for individuals without societal or political connections. Inequality is the logical consequence and reinforces the behaviour of cynical people who participate in other forms of malfeasance. Those excluded from the patronage system due to class, ethnicity or party affiliation, when awarded an administrative post, all too often participate in the same corrupt practices that vexed them as outsiders, arguing that it is 'my turn'.

Non-elite corruption is common to all Amazonian countries, but it is more acute in Bolivia, Peru and Ecuador and less so in Colombia, Brazil, Guyana and Suriname. Nonetheless, the overall opinion of citizens of their public servants remains low (Figure 6.16). Elite corruption is also widespread and flagrant, but the cynicism of the general populace is the consequence of the impunity enjoyed by its practitioners, which is the consequence of a dysfunctional and corrupt judicial system (see Chapter 7).

The most notorious scandals are usually associated with the Executive Branch because, as an infamous bank robber once said of his targets, 'That's where the money is'.* The practice of paying off politicians with suitcases full of money remains common in all eight countries, but cash bribery has been superseded by more complex kickback schemes for large infrastructure projects. These complex contracts typically include numerous sub-contractors and consulting services, which can easily conceal an inflated price or a non-existent service, while payments are channelled to a similarly disguised bank account controlled by the so-called public servant (see below).

This type of malfeasance comes with a hidden price tag, because none of the parties is motivated to question the wisdom of the project. How many roads have been built or paved because politicians and their patrons were speculating in land? How many clinics stand empty because there is no budget for support staff and equipment? How many half-finished sports stadiums are abandoned because they are larger than the resident population?

^{*} The quote is usually ascribed to Willie (The Actor) Sutton, who was arrested and jailed in 1952 after a career of robbing banks. Source: The Federal Bureau of Investigation (FBI).

Culture and Demographics Define the Present

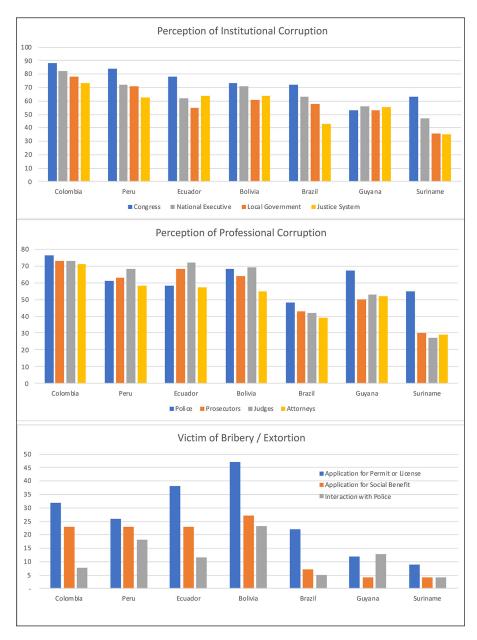


Figure 6.16: Surveys conducted by the Latin American Public Opinion Project provide insight into the sources of corrupt practices by different actors.

Data source: LAPOP 2023.

Political Nepotism and Elected Clans

The family is a cornerstone of Latin America culture. In the prototypical family, members reside in close proximity to one another and rely on a multigenerational nuclear family for emotional and economic support. The extended family is also important and is often the primary network individuals use to gain access to social, educational and professional opportunities. In most cases, the support of the family is an unalloyed asset.

Family traditions are key to continuity of the artisanal and technical trades where children learn a craft from a parent; likewise, they predominate among professional guilds where younger generations tend to pursue the vocation of the previous generation(s). Inheritance is a fundamental property right and few question the ethics of individuals operating multi-generational farms, or the tradition of passing a small or medium-scale enterprise from parent to offspring. The reliance on family as an employment agency is less wise for larger companies and the most successful family-owned corporations recruit professionals to operate their businesses. Proponents of family-owned corporations, however, argue they pursue better strategic planning because they are driven by long-term goals, shared visions and values, which include a commitment to invest in the communities where they operate.

None of those explanations is valid, however, when family connections provide preferential access to the civil service, which engenders the same negative attributes as political patronage. Some argue that the same is not true for elected officials because of the intervention of voters, but that rationalisation only holds when the election is 'free and fair' and, even then, there is an electoral advantage associated with name recognition and tribal politics. Political families are not unique to Latin America, and the exercise of political power is a genuine skill learned by ambitious children. Not infrequently, the progeny are more adept at governing than their forebears. Nevertheless, the endemic corruption that infests governmental institutions makes political nepotism particularly dangerous. Most political clans operate within local and regional jurisdictions where influential families control important economic entities, media outlets and political parties. They naturally seek to dominate the electoral process and capture administrative functions for their personal (and familial) benefit.

In Brazil, the most notable example of political nepotism is the clan presided over by Jader Fontenelle Barbalho. He began his political career during the 1970s by participating in both state and national legislatures as a member of the so-called 'opposition' party that was tolerated by the military regime. His populist rhetoric and skills as a tactician led to his election as governor in 1983, followed by an appointment in 1988 as *Ministro de Desarrolho Agrário*, which gave him control of INCRA during the heyday of the Amazonia

land rush. ¹⁸⁴ This was a position of true power, which he allegedly used to finance his campaign for a second term as governor in 1991, and to build what eventually became an exceptionally large portfolio of landholdings. ¹⁸⁵ He was eventually accused of inflating the cost of dozens of *fazendas* between 1988 and 1990 as part of a programme to expropriate land for redistribution to landless peasants. ¹⁸⁶ The alleged criminal conduct was exposed in 2003, by which time he was once again an elected official, causing the case to be transferred from the criminal court to a privileged forum presided over by the *Supremo Tribunal Federal*, * where it languished until the statute of limitations caused its dismissal in 2015. ¹⁸⁷

Jader Barbalho was also implicated as the mastermind of the SUDAM embezzlement scheme (1997–2000), which involved skimming tens of millions of dollars from subsidised loans intended to support productive enterprises (see below). By now an influential senator, Barbalho's role was so obvious he was forced to surrender his position as Senate president in 2000. He eventually resigned from the Senate to avoid impeachment proceedings (*cassação de mandato*) that would have made him ineligible for public office for life. He returned to the Senate in 2011, where he assumed an influential role as a leader on the *Bancada Ruralista* and as a strategic ally of President Rousseff – until he voted for her impeachment in 2016.¹⁸⁸

As an influential member of the PMDB (now MDB)†, he allegedly played a leadership role in the organisation of the *Lava Jato* scandal. The attorney general made the first formal accusation in 2016, accusing him of accepting R\$30 million in bribes to facilitate construction of the Belo Monte hydropower complex.¹⁸⁹ This was followed by a broader indictment naming him and seven other senior members of his party for organising the reception of R\$ 867 million in bribes, kickbacks and illegal campaign contributions (see below).‡ As usual, the *Tribunal Federal Supremo* (TFS) proceeded slowly, during which time Barbalho worked to support the campaign of Inácio Lula da Silva in 2022 and served on the transition team following the election. The TFS dismissed the charges against the senator and his alleged co-conspirators in March 2023.¹⁹⁰

^{*} The Constitution of Brazil gives certain elected officials (governors, members of Congress, vice presidents and presidents) *Foro Privilegiado*, which isolates any criminal proceedings from the regular courts and requires them to be tried by the Supreme Court (*Tribunal Supremo Federal*).

[†] Partido do Movimento Democrático do Brasil (Movimento Democrático Brasileiro).

^{\$\}frac{1}{2}\$ Senators: Edison Lobão (MA), Jader Barbalho (PA), Renan Calheiros (AL), Romero Jucá (RR), Valdir Raupp (RO), former President José Sarney and the former president of the Petrobras subsidiary Transpetro, Sérgio Machado. Source: G1 globo.com (8 Sept. 2017), 'Janot denuncia políticos do PMDB do Senado por organização criminosa': https://g1.globo.com/politica/noticia/janot-denuncia-politicos-do-pmdb-do-senado-por-organizacao-criminosa.ghtml

The Cultures of Corruption



Top right: Agência Senado; Top left, bottom left and right: CC BY 2.0 via Wikimedia

The Barbalho family of Pará is one of Brazil's most influential political dynasties. It includes the patriarch, Jader (senador); his first wife, Elcione Zaluth (diputada federal); their eldest son, Jader filho (Ministro de Cuidades); and their younger son, Helder (Governador do Pará). See <u>Table 6.3</u>.

Numerous other members of the Barbalho family have held elected office or appointments in local, regional and national institutions (<u>Table 6.3</u>). The best known scion of the younger generation is Helder, who served as mayor of Pará's second-largest municipality before running for governor in 2014. He lost that election and was accused of soliciting an illegal campaign contribution from a subsidiary of the Odebrecht conglomerate. As an influential member of the PMDB, Helder was appointed to a series of ministerial posts in the Rousseff and Temer administrations and ran (and won) again in 2018 for governor of Pará.

Helder Barbalho's government has been notable because he presents himself as a spokesperson for a scientific approach to policy. He has been outspoken in his support for COVID vaccinations and climate change initiatives, while steadfastly supporting legal forms of mining and agriculture. As a so-called green governor, he has committed to reducing carbon emissions by 45 per cent by 2035 and been a vocal advocate of President Lula's social agenda, as well as backing proposals to explore for oil in the region referred to as the Equatorial Margin. Helder Barbalho won reelection in 2022 with more than seventy per cent of the vote.

Another well-known political clan revolves around a former senator from Roraima, Romero Jucá. He began his political career in his home state of Pernambuco, but moved to Brasília in the early 1980s, where he was nominated to head the *Projeto Rondon*, a volunteer service dedicated to the colonisation of the Amazon. He then served as president of the *Fundação Nacional do Índio* (FUNAI), where he focused his attention on Roraima, his future home and political fiefdom. His administration of FUNAI provoked multiple investigations into allegations of bribery, embezzlement and trafficking in illegal timber (see Chapter 11). His most harmful act, however, was a betrayal of trust in his fundamental obligation to protect Indigenous people from the ravages of frontier society.

In 1987, he arbitrarily modified the borders of the recently created Yanomami Indigenous Territory, reducing its size by 75 per cent and dividing it into nineteen disconnected units. In the excised areas, he facilitated the entry of some 40,000 *garimpeiros*, while expelling missionaries and NGOs then providing health care to recently contacted Indigenous communities. These deliberate actions directly caused the death of an estimated 25 per cent of the Yanomami population and were categorised as a human rights violation by the *Comissão Nacional da Verdade*. Social activists view his actions as a crime against humanity and, quite possibly, a form of genocide. ¹⁹²

^{*} This was exposed during the *Lava Jato* investigation when Odebrecht executives testified that Helder Barbalho received R\$1.5 million in 2014 in exchange for a garbage collection contract for several municipalities in Pará. Source: G-1 globo.com: https://gl.globo.com/politica/operacao-lava-jato/noticia/dela-cao-da-odebrecht-helder-barbalho-e-suspeito-de-receber-r-15-milhao-em-cam-panha-2014.ghtml

The Cultures of Corruption

Table 6.3: The major figures of the Barbalho political clan.

| Name | Role | Elected or Appointed Office | Term | Scandals |
|--|---|---|---|--|
| Laércio Wilson Barbalho, | Founder Patriarch | Deputado Estadual | 1950–1967 | |
| Jader Fontenelle Barbalho (78) r | Current Patriarch | Escritórios Estaduais Deputado Federal Governador Min. Previdência Social Min. Des. Agr. (INCRA). Governador Senador Deputado Federal Senador | 1967–1975 1975–1983 1983–1987 1987–1988 1988–1990 1991–1994 1995–2001 2003–2010 2011–2023 | INCRA SUDAM PCI Terra Mensalão Lava Jato |
| Elcione Therezinha Zahluth Barbalho | Former Wife of Jader Barbalho; Mother of Jader Junior and Helder | Deputado Federal | 1995–2003 2007–2027 | Diversion of public finance campaign funds |
| Simone Maria Morgado Ferreira | Current (second) wife of Jader Barbalho | Deputado Estadual Deputado Federal | 2005–2015 2015–2019 | SUDAM |
| Jader Barbalho Junior | Son of Jader and Elcione Barbalho | Ministério das Cidades | 2023-2024 | |
| Helder Barbalho | Son of Jader and Elcione Barbalho | Prefeito de Ananindeua Ministro da Pesca e Aquicultura Secretário de Portos e Infraestrutura Ministro da Integração Nacional Governador Pará | 2005–2013 2015 2015–2016 2016–2018 2019–2027 | SUDAM Lava Jato |
| Daniela Lima Barbalho | Wife of Helder Barbalho | Conselheira do Tribunal de Contas do Estado do Pará | 2023 (lifetime appt) | |
| Josué Bengtson | Brother in law of Jader Barbalho | Deputado Federal | 1999–2007 2011–2019 | Máfia das ambulâncias |
| Priante Barbalho | Nephew of Jader Barbalho | Deputado Federal Comissão de Meio Ambiente | 1995–2007 2001–2027 | Lava Jato |
| Eduardo Barbalho | Son of Helder Barbalho | Prefeito de Ananindeua | 2023–2024 | |
| Renan Normando | Nephew of Jader Barbalho | | 2020 | |
| Igor Normando | Nephew of Jader Barbalho | Vereador Belem Deputado Estadual | 2008–2018 2018–2027 | |

Jucá was rewarded for his pro-development policies in 1988 by being named governor of the federal territory of Roraima during its transition to full statehood. He lost the race for governor in 1990, but his first wife, Teresa Surita, was elected mayor of Boa Vista in 1992, and together they organized a political machine with a chameleon-like ability to support the political parties of the moment. Jucá was elected to the Senate in 1995, but in the interim started a poultry farm that collapsed soon after initiating operations. An audit conducted during the SUDAM scandals of the late 1990s revealed he used phantom properties as collateral for a loan from the Banco de Amazonas. Like many criminal cases involving senators, it was dismissed by the *Supremo Tribunal Federal* on procedural grounds in 2008 (see Chapter 7).

Jucá financed his political activities, in part, via the *Fundação de Promoção Social e Cultural do Estado de Roraima*, a non-profit organisation purportedly dedicated to assisting Indigenous people; coincidentally, the federal programme sponsoring that foundation was created by legislation sponsored by the senator. ¹⁹⁴ The director of the foundation, a Jucá confidant, diverted money intended for health care for Indigenous communities into entities associated with the Jucá political machine. This case led to legal action, but the perpetrators avoided prosecution because investigators had obtained evidence without a search warrant. ¹⁹⁵

Elected to three Senate terms, Jucá leveraged his seniority to obtain cabinet positions in the administrations of Lula da Silva (*Previdência Social no Brasil*) and Temer (*Ministério do Planejamento*). During his tenure, he repeatedly introduced legislation that would allow mining on Indigenous lands, most notably in 2012 when a company controlled by his daughter, Marina, filed a permit to mine for gold in Indigenous lands in Roraima. His son, Rodrigo, was elected to the state assembly in 2010 and ran unsuccessfully in 2014 in a campaign partly funded by contributions from Odebrecht.

Roman Jucá and Teresa Surita divorced in the 1990s, but they remain political allies. She has been elected to five terms as mayor of Boa Vista, and has served in Congress and as secretary in the Urban Ministry. She has been widely lauded for her work promoting municipal governance and advancing social issues related to women's rights, but has also been implicated in price rigging for garbage collection and public works contracts during her tenure as mayor.¹⁹⁸

Both Jucá and Surita have children with other partners. Apparently, relations among their offspring are close enough for them to organise a business venture that defrauded the state by selling an over-priced landholding (R\$ 32 million) for a *Minha Casa Minha Vida* housing project on the outskirts of Boa Vista. ¹⁹⁹ The company building the housing units (Odebrecht) had contributed to the reelection campaign of Senator Jucá, who, like his colleague Jader Barbalho, was a central figure in the *Lava Jato*

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Table 6.4: A partial list of political families in the Legal Amazon of Brazil.

| Clan surname | State | Founder | Prominent members | Philosophy | Party affiliation | 2022 candidate |
|-----------------|----------------|-----------------------------|--|--|----------------------|-------------------|
| Cameli | Acre | Orlier Messias | Gladson César Messias* | Pendular | PPB | Bolsonaro |
| Viana | Acre | Wildy | Jorge Tião | Sustainable development | PT | Lula |
| Capiberibe | Amapá | João Raquel | Camilo Janete | Sustainable development | PSB | Lula |
| Cidade | Amazonas | Orlando | Roberto Maia | Pendular | UNIÃO | Bolsonaro |
| Donadon | Rondônia | Marcos | Rosangela Melkisedek Natan Marcos Antnio | Conventional | UNIÃO | Bolsonaro |
| Jucá | Roraima | Romero | Teresa Surita | Conventional | MDB | Bolsonaro |
| Sarney | Maranhão | Jose Former President | Roseana \Jose Filho | Pendular | MDB PV | Bolsonaro Lula |
| Campos | Mato Grosso | Julio Domingos | Jayme Domingos Júlio José Benedito Paulo Márcia | Conventional | UNIÃO | Bolsonaro |
| Pinhiero | Mato Grosso | Jonas | Emanuel, Marcias Emanualzhino | Pendular | MDB | Bolsonaro |
| Barbalho | Pará | Lercio Wilson | Jader Elcione Jader Filho Helder | Conventional Conventional Conventional Pendular | MDB | Lula |
| Barbosa | Tocantins | Fenelon | Wanderlei Léo Marilon | Conventional | PDC | Bolsonaro |

PPB Partido Progressista Reformador

PSB Partido Socialista do Brasil PT Partido do Trabalhadores

UNIÃO União Brasil: Democratas + Partido Social Liberal

PV Partido Verde

MDB Movimento Democrático do Brasil

corruption network (see below).²⁰⁰ Romero Jucá lost his reelection bid in 2019, but maintains his position as a member of the MDB's National Executive Committee and chair of its Roraima branch.²⁰¹

The Barbalhos and Jucás are the most infamous political clans in the Brazilian Amazon, but they are not unique. Similar family-based political machines operate in all states of the Legal Amazon and, with few notable exceptions, support conventional development paradigms (Table 6.4). In Bolivia, the Fernández family dominates politics in Santa Cruz, while Keiko Fujimori controls the largest bloc in the Peruvian Congress. Several recent Colombian presidents (Pastrana and Santos) are descended, directly or indirectly, from former Colombian chief executives, and Ecuador's president is the son of a prominent politician and former presidential hopeful.

Land Fraud

The distribution of public land has, at one time or another, been official government policy in almost every Amazonian jurisdiction. Some epochs and jurisdictions favoured small holdings over large estates and vice versa, but the entire process, and the system it spawned, is characterised by inefficiency, political patronage, class privilege and corruption.

Across the region, hundreds of thousands of small family farmers have been waiting for years to obtain documents validating their land claims. Those fortunate to have obtained certified titles often pay a modest bribe to move their documents along a bureaucratic chain of requirements, formularies, taxes, charges, validations, surveys, etc. A certified title materially impacts the price of real estate, and people are willing to pay 'speed money', particularly if there is a document that is lacking or does not conform to a specific regulatory ruling. Their claim may be wholly legitimate, but without the *propina*, the document can languish for weeks, months or even years. These types of mundane transactions are seldom reported in the press, much less to judicial authorities.

More flagrant abuses of the land tenure system are perpetuated by land grabbers who manufacture property deeds using several well-known fraudulent schemes (see Chapter 4). These professional thieves sell the newly minted landholding to third parties, who are fully cognisant they are purchasing a misbegotten asset. The land grabber, the functionary and the buyer are all engaged in a type of 'grand theft', because the amount of money is substantial, including not only a bribe, but also the sale price and the true value of the land. The damage is compounded if the parcel is claimed by an Indigenous group or traditional community (see Chapter 4).

This type of land fraud is very common in jurisdictions where local elected officials collude with their constituents to expedite land grabbing. This is certainly the case in Chiquitania (Santa Cruz, Bolivia)²⁰² and the

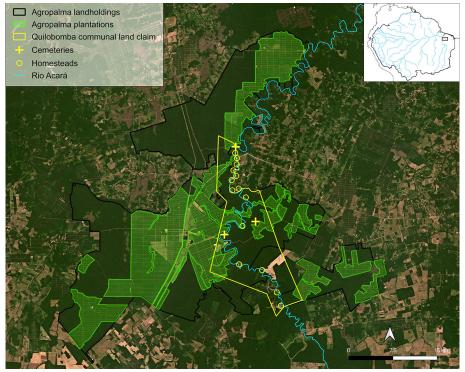
Ucayali Province (Loreto, Peru),²⁰³ where Mennonites and *Interculturales* are engaged in yet another scramble for public lands. It is also occurring along BR-230 and BR-319 in southeast Amazonas.²⁰⁴ Support by local officials is often flagrant, such as when the prefect of Novo Progresso (Pará) collaborated with migrant settlers to organise a *dia do fogo* on landscapes adjacent to BR-163, where settlers burned illegal forest clearings on land within the INCRA-sponsored *Projeto de Desenvolvimento Sustentável (PDS) Nossa Terra*.²⁰⁵

Invariably, buyers will profess to have purchased the property in 'good faith' and, not infrequently, will prevail in court because their documents have been validated by a state agency. This type of legal manoeuvre, which underlies hundreds of thousands of land transactions across the Pan Amazon, can emerge as a problem years or even decades after the land was originally occupied. For most landholders, this is a low-risk liability that can be ignored because it is so common. Nevertheless, it occasionally creates a public relations nightmare for high-profile business ventures, as recently discovered by Brazil's largest producer of palm oil, Agropalma.

The *Instituto Nacional de Colonização e Reforma Agrária* (INCRA) is the government agency charged with certifying the legal status of rural properties in Brazil, a task that remains incomplete after multiple initiatives to modernise its administrative procedures (see Chapter 4). The agency has been involved periodically in corruption scandals, such as the one organised by Jader Barbalho between 1987 and 1988. In 2014, federal prosecutors staged Operação Terra Prometida, which led to the arrest of eighty individuals in Mato Grosso who had participated in a conspiracy to appropriate ~100,000 hectares of public land. The scheme attempted to distribute 100-hectare plots within the *Projeto de Assentamento (PA) Itanhangá*, an INCRA collective landholding intended for landless rural workers. Instead, the plots were given to middle-class farmers who were ineligible because they already owned land or had incomes above the limits defined by law. Among the beneficiaries were two brothers of the agriculture secretary at the time and a prominent politician affiliated with the *Partido do Movimento Democrático* Brasileiro (PMDB).206

That scandal motivated the *Tribunal de Contas da União* (TCU) to conduct a broader audit of INCRA's operations, which revealed that potentially a third of all historical land grants made through its settlement programmes were fraudulent. Evidence of wrongdoing was obtained by comparing national identification numbers of the individuals who had received land with other information (<u>Figure 6.17</u>). The audit found that more than 1,000 politicians and 140,000 civil servants had improperly received public lands, while more than 37,000 parcels were awarded to individuals who were dead at the time of their application.²⁰⁷ The accumulated opportunity cost to the

Culture and Demographics Define the Present



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Agropalma, Brazil's largest producer of palm oil, markets its production as 'sustainable' by adhering to the certification process sponsored by the Roundtable for Sustainable Palm Oil (RSPO). In 2021, an investigative journalist revealed the company had acquired land that infringed upon a longstanding claim by a Quilombola community. The accusation caused the RSPO to suspend its certification of Agropalma's production until it negotiated a compensation agreement with the community and legalised the land that had been acquired using fraudulent documentation (Mendes 2023b).

nation was estimated at approximately R\$ 135 billion.* Unsurprisingly, land fraud was most prevalent in the Legal Amazon. †

The graft that plagues the smallholder programmes should be evaluated in the context of the influence peddling that accompanied the land

^{*} At exchange rates in June 2021, R\$135 billion would be equivalent to ~US\$27 billion. Source: *Tribunal de Contas da União* (2016), Relatório de TC 000.517/2016-0

[†] The findings of the audit obligated the TCU to block the emission of new land titles and freeze credits to an estimated 400,000 rural smallholders participating in INCRA settlement programmes. The moratorium was ended in November 2016 after INCRA implemented a series of reforms. Source: INCRA Noticias.

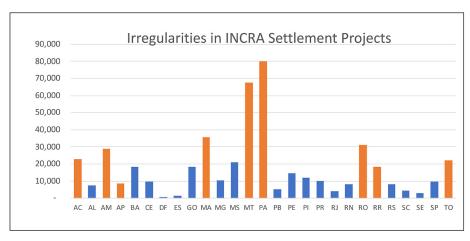


Figure 6.17: The national auditing agency of Brazil (Tribunal de Contas da União) compared an INCRA database with other national registries and discovered that settlement programs, which have strict requirements to ensure that benefits accrue only to landless rural citizens, have distributed land to more than 479,000 ineligible individuals. Data source: TCU – Tribunal de Contas da União 2016, Relatorio de TC 000.517/2016-0

grants of the 1970s and 1980s, when the military regime awarded business magnates and political allies enormous tracts of land. Presumably, these transactions were legal, and many tracts were purchased from development corporations or state land agencies that existed before and parallel to INCRA. Land grants or purchases of that magnitude do not happen without political influence. They may technically be legal, but they are still corrupt.

Escândalo SUDAM

The Superintendência de Desenvolvimento da Amazônia (SUDAM) was created to foster the development of private enterprises in the eight states of the Legal Amazon. Its policies in the first four decades of its existence were controversial because they catalysed a deforestation boom; however, the administration of SUDAM was also associated with accusations of graft and political influence. The scope and scale of the corruption shocked the country in 2000 when a personal feud between two powerful Senators (Jader Barbalho and Antonio Carlos Magalhães) led to the revelation of a mafia-like conspiracy that had embezzled more than R\$ 4 billion (~US\$ 500 million)* from the public treasury. It was, at the time, the costliest corruption scandal in Brazilian history.²⁰⁸

^{*} Values in US\$ are difficult to know, because the scandal coincided with monetary reforms in Brazil and the implementation of the Plano Real (1994), which triggered exchange rate fluctuations that culminated in 1999 with a large de-

The perpetrators created an audacious assembly-line process where loans and tax credits were siphoned into the personal accounts of owners of fake businesses, agency staff and influential politicians. Consulting companies operated by former agency executives acted as intermediaries by offering their services in the design of 'projects' that met SUDAM's technical conditions. Offering a full-service package, the consultants arranged for meetings with key decision-makers to ensure projects were approved by the loan committee and, ostensibly, technical assistance for the implementation of the proposed investments.

Criminal activity was compounded by fictional project implementation reports and fraudulent accounting services that ensured false invoices and contracts were accepted by auditors. Each step, document, plan or meeting had a fee or commission that ensured that between thirty and fifty per cent of the total loan went to the consulting firm, which then distributed the funds back to functionaries inside SUDAM. The scheme was based almost entirely on phantom companies that were created for the specific purpose of stealing money: embezzlement pure and simple.

The most egregious examples of malfeasance were revealed by Senator Antônio Carlos Magalhães, who testified in Congress about twenty projects in the Municipality of Altamira, each with a nominal value of between R\$ 4.5 million and R\$ 9 million for a total of R\$ 106 million. One Most were for agricultural or plantation ventures organised by people closely associated with Senator Jader Barbalho, including his second wife (Simone Maria Morgado Ferreira), who was a co-owner of a bogus frog-leg production facility (*Ranário Touro*), and his son Helder, who was listed as a co-owner of a food company (*Tropical Indústria de Alimentos*) that apparently never sold any food.

The investigation, which focused on activities between 1997 and 1999, identified 151 fake investments valued at R\$ 547 million. Among the crimes committed were embezzlement, misrepresentation, use of false documents and money laundering. In related cases, Jader Barbalho was accused of accepting R\$ 40 million to facilitate a R\$ 200 million loan to an agro-industrial company specialising in certified rice seed, while an automobile parts factory valued at US\$ 654 million in São Luis de Maranhão was linked to Roseana Sarney.

valuation of the real. Values in *reais* (R\$) are those reported in Brazilian media; corresponding values in US dollars are based on contemporary exchange rates as calculated by an online converter that seeks to use standard value across multiple currencies. See: https://www.historicalstatistics.org/Currencyconverter.html

^{*} Roseana Sarney Murad served as the Governor of Maranhão (1995–2002; 2009–2014) and as Senator (2003–2009) is also the daughter of former President José Sarney.

These revelations span only two years of SUDAM's operations and presumably represent only a fraction of the fraud perpetrated by its functionaries and political patrons between 1966 and 2003. The *Ministerio Público Federal (MPF)* filed criminal charges against 143 individuals, only one of whom was found guilty.²¹² Simultaneously, the MPF filed 24 civil lawsuits against thirty businesspeople, 27 public servants and 29 legal entities, seeking R\$ 323 million in compensation for damages to the public treasury, but it apparently recovered only R\$ 28 million.²¹³

The scandal was an enormous embarrassment to President Cardoso, who had cultivated an image of probity and fiscal responsibility. This motivated him to liquidate SUDAM and relaunch it as the *Agência de Desarrolho da Amazônia* (ADA). A court in Tocantins ordered the apparent mastermind of the scheme, Jader Barbalho, to return R\$ 2.27 million to SUDAM, but he appealed that ruling and there is no public record of any payment. The scandal forced his resignation from the Senate in 2001, but he was elected to the lower house of the national Congress in 2003, which effectively removed his case from the criminal justice system and returned it to the jurisdiction of the *Supremo Tribunal Federal* (see Chapter 7). Jader Barbalho returned to the Senate in 2011, and his case was dismissed by the that court in 2014.²¹⁴ The SUDAM scandal is a near-perfect example of the brazenness of political corruption and the impunity enjoyed by its practitioners.

Petro Theft: An Andean Tradition

There are numerous examples of alleged fraud associated with the oil and gas industry, though considering the revenues the sector generates, they may be only a fraction of bribes and kickbacks in this sector. Following are a few examples of misconduct that have been reported by the press.

In Bolivia, the architect of President Evo Morales' strategy to nationalise the oil and gas sector, Santos Ramírez Valverde, was convicted in 2009 for extorting a bribe from a businessman contracted to build a strategically important gas-liquid separation plant. The contract, which was rescinded due to the scandal, was priced at US \$498 million, in stark contrast to the one negotiated by his successor for US\$ 190 million. The graft perpetrated by Ramírez was not caught by an audit or anti-corruption investigation, but by fallout from the murder of the businessman, who was in the process of paying him a US\$ 450,000 cash bribe – presumably an installment of a much larger sum. In a second scandal related to the same refinery, the construction manager was arrested in 2014 for accepting a US\$ 480,000 bribe when he was arrested for drunk driving and was unable to explain why he was in possession of US\$ 90,000 in cash.²¹⁵

In Ecuador, several international oil trading companies (Gunvor, Vitol, Trafigura and Global Asphalt) have been implicated for diverting

US\$ 70 million to Panamanian intermediaries on behalf of a dozen senior executives at Peteoecuador. The bribes were paid to secure contracts for the transport and delivery of crude oil as stipulated by Ecuador's debt payment programme with China. The scheme was discovered thanks to the 2016 publication of the Panama Papers, which revealed questionable money flows to Ecuadorian politicians and their families. Ironically, the contract was priced as a fee of one dollar per barrel – exactly the same amount paid as royalties into the *Fondo Amazónico*, Ecuador's financial vehicle for funding sustainable development in its Amazonian provinces (see Chapter 5).

Surprisingly, there are no mega-scale corruption scandals in the Peruvian oil sector, presumably because that country relies on private-sector operators to explore, produce and commercialise hydrocarbon resources. Nonetheless, state-owned companies have been involved in at least two moderately large scandals. In 2008, Perupetro was rocked by the so-called *Petro Audios*, which revealed payments of bribes during a bidding process for control of oil and gas blocks in Madre de Dios. A small Norwegian company admitted to paying US\$ 120,000 to consulting companies controlled by two key cabinet ministers, although executives testified the payments were for legal services rather than bribes.²¹⁸ The scandal destabilised the government of President Alan García and led to a nine-year legal process that, unsurprisingly, ended without a conviction.²¹⁹

A separate and ongoing scandal revolves around the recurrent oil leaks on the *Oleoducto Nor Peruano* (ONP) and more than US\$ 141 million in contracts awarded by Petroperú for mitigation and remediation. The contracts were expedited by an emergency decree that did not require a competitive bidding process, and were soon followed by accusations of cronyism and incompetence.²²⁰ Even more serious are accusations that the pipeline was sabotaged in order to generate clean-up work for contractors or local subcontractors.²²¹ That a bribe might actually lead to significant and long-lasting environmental damage is a graphic example of the harm caused by corruption.

Lava Jato: Access Money on Steroids

The largest and most infamous corruption scandal of the last decade began with a criminal investigation into the operations of Brazil's largest corporation: Petrobras. The scandal got its name because the organisers of the bribery, kickback and money laundering scheme used a financial services company in Brasília located next to a gas station and car wash (*Lava Jato*). The investigation started with a seemingly minor complaint made in 2009 to the Federal Prosecutor's office in Curitiba, Paraná, by a businessman concerned that somebody was using his company to launder money. Prosecutors followed this lead and discovered that political operators affiliated

with the government had been funnelling illegal campaign contributions from companies doing business with Petrobras in exchange for favourable treatment in construction contracts and in the procurement of goods and services.²²²

The scandal exploded onto the national scene in 2014, when a team of highly motivated federal prosecutors mounted an aggressive investigation under the supervision of a judge with experience in public corruption cases (Sergio Moro). Unlike most corruption scandals, which typically lead to prolonged investigations and inconsequential legal outcomes, this scandal triggered an avalanche of information which destabilised governments in Brazil, Peru and Ecuador.

The first accusations centred on the construction of an oil refinery in Pernambuco, but the probe soon revealed it extended to other projects and every major construction company in Brazil. Unsurprisingly, the recipients of the bribes were high-level government functionaries, including both allies and opponents of the governing coalitions of President Lula da Silva and his successor Dilma Rousseff.* The evidence extracted from the plea bargains negotiated by the prosecutors were unprecedented and, because shares of Petrobras are traded on the New York Stock Exchange, the indictments triggered investigations by regulatory and judicial authorities in the United States. Eventually, the sworn testimony of business executives collaborating in exchange for leniency forced the *Supremo Tribunal Federal (STF)* to accelerate the prosecution of influential elected officials, including governors, members of Congress and, eventually, a sitting president (Temer).²²³

The criminal investigation demonstrated how bribes distorted investment decisions by public officials. Reportedly, companies paid between one and three per cent of a contract's gross value for hundreds, perhaps thousands, of overpriced construction projects. (Figure 6.18) The kickbacks were laundered through domestic and offshore bank accounts, which allowed companies to camouflage the bribes as fees paid to legal firms and consulting companies, or as the procurement of (overpriced) goods and services.²²⁴

Petrobras officers benefited in exchange for their willingness to manipulate the terms of a public bidding process to favour a specific company, while companies conspired to divide up the lucrative contracts among themselves. Politicians were rewarded for their votes in Congress, while high-level functionaries in state ministries and regulatory agencies were

^{*} Partido dos Trabalhadores (PT) led by former presidents Lula de Silva and Rousseff and the Partido do Movimento Democrático Brasileiro (PMDB/MDB) a centrist party that has supported almost every president since the restoration of democracy in 1985, and the Partido Progressista (PP), a centre-right party formed by politicians linked to the military regime (ARENA). Source: Valarini and Pohlmann 2019.

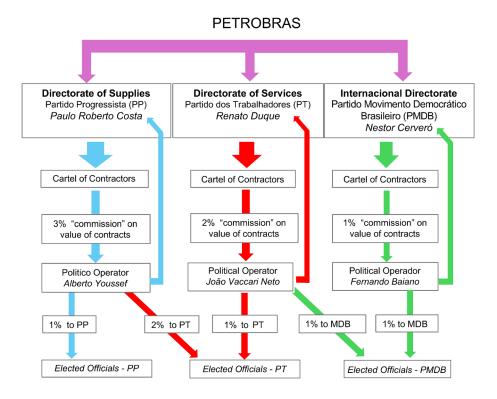


Figure 6.18: The Lava Jato corruption scandal was a highly coordinated scheme, based on bribes and kickbacks, that was organised by three major political parties. The individuals named in the diagram were prosecuted in the ordinary criminal justice system; they either pled guilty or were convicted of crimes and sentenced to between five and thirty years in prison. Most are free on bail or have died of natural causes.

Data source: https://infograficos.estadao.com.br/politica/operacao-lava-jato/esquema/

rewarded for their loyalty to a political party.²²⁵ The task force eventually arrested 292 individuals, of whom 278 either pleaded guilty or were convicted of crimes that including fraud, bribery and money laundering.²²⁶ Prominent individuals from five of the country's largest political parties were found guilty in a court of law, while persons from an additional thirteen parties were indicted for illegal activities and representatives from another fifteen parties were investigated for questionable behavior.

The cost to Petrobras was reflected in its balance sheet of 2014 when it registered a US\$ 2 billion write-down to offset the bribes paid to the companies that had participated in the bid-rigging scheme. The investigation in the United States led to a 2018 settlement in which Petrobras agreed

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Text Box 6.4: Odebrecht

Marcelo Odebrecht, the CEO of Brazil's largest construction company, confessed to a US court that between 2001 and 2015 his firm paid US\$ 788 million in bribes that generated US\$ 3.34 billion in illegal profits in Brazil and eleven other countries, including Peru, Ecuador, Colombia and Venezuela. The company, Norbert Odebrecht SA, was fined R\$ 479 million in Brazil and US\$ 4.5 billion in the United States. The scandal destroyed the company's reputation and forced it into bankruptcy, which it used to negotiate a reduction of its penal liability of US \$2.6 billion.

The Odebrecht family continues to operate a diminished company, which it has rebranded as NOVONOR, and hopes to use the protection provided by bank-ruptcy laws in Brazil and the United States to restructure its US\$ 25 billion debt. Its goal is to retain ownership of the company and prevent the auction of its Braskem petrochemical company to pay its creditors, which include all of Brazil's major banks and most of its public-sector pension funds.

Marcelo Odebrecht was sentenced to nineteen years in prison; however, following the financial settlement reached in 2017, he was released from a federal penitentiary and placed under house arrest. In 2022, his sentence was reduced to seven years, and in April 2023 he was emancipated from all legal prescriptions on his movements and activities.

Source: The Wall Street Journal (2019) https://www.wsj.com/articles/brazils-odebrecht-files-for-bankruptcy-in-u-s-too-11566853451

to pay fines levied by the Department of Justice (DOJ) and the Securities and Exchange Commission (SEC) of US\$ 853 million, of which $\sim\!80\%$ was returned to the Brazilian state. Shortly thereafter, the company settled a class-action civil suit filed on behalf of investors for an additional US\$ 2.6 billion. A criminal investigation brought by the DOJ in Manhattan led to the arrest and conviction of the CEO of Odebrecht, Brazil's largest construction company and, at the time, the country's second-largest privately held company (see Text Box 6.4)

At the heart of the scandal was a secret agreement among thirteen construction companies, known as the *Cartel de Empreiteiros*, who agreed not to compete on individual Petrobras contracts.* The conspiracy to defraud the government went well beyond the cartel's business transactions with Petrobras and infected the *Programa de Aceleração do Crescimento* (PAC), a national programme to improve basic infrastructure and stimulate the national economy via public works projects. Between 2007 and 2015, the program allocated ~R\$ 2.1 trillion (~US\$ 500 billion) to projects across the

^{*} Includes: Odebrecht, OAS, Camargo Corrêa, Andrade Gutiérrez, Queiroz Galvão, UTC Engenharia, Engevix, IESA Óleo e Gás, Toyo Setal, Mendes Júnior, Galvão Engenharia, Skanska, Promon Engenharia.

country.* Assuming the custom of paying a bribe of between one and three per cent, the graft associated with the PAC could be as high as between US\$ 5 billion and US\$ 15 billion. If those practices led to overbilling, however, then the total cost to the nation probably exceeded US\$ 50 billion.

The impacts of the *Lava Jato* scheme are still reverberating through the Brazilian economy. Government resources were wasted on non-productive expenditures, but the scandal also delayed strategic investment in several key sectors. According to a study by a policy institute linked to labour unions, the *Lava Jato* scandal reduced investments leading to a net loss of ~4.4 million jobs and a reduction of R\$ 172 billion (US\$ 34 billion) in investments in energy production and construction. An environmental activist might not bemoan the loss of those types of investments, but the Fundação Getulio Vargas estimated it reduced national GDP by about 3.5 per cent each year between 2014 and 2017 (US\$ 10 billion to US\$ 20 billion per year).²²⁹ This is a conservative estimate, however, because losses compound over time and inflict permanent damage on Brazilian society.

Arguably, the *Lavo Jato* scandal and the disillusionment with the political elite set the stage for the election of Jair Bolsonaro, whose actions threatened democratic institutions and led to a rollback of environmental regulations key to the conservation of the Amazon and the welfare of Indigenous communities. Bolsonaro was narrowly defeated by Inácio Lula da Silva in the 2022 elections; however, Lula must now govern a country where a significant share of the population view him as a corrupt politician who is free thanks to a dubious decision by the Supreme Court (see Chapter 7).

Lava Jato in the Legal Amazon

The scandal has impacted the Pan Amazon in multiple ways, particularly by the construction of numerous infrastructure projects executed by the PAC and financed by SUDAM (<u>Table 6.5</u>).

Many of these investments were controversial because their environmental and social impacts were not afforded appropriate due diligence as the decision-making process was tainted by conflicts of interest, including:

 Urucu – Coari – Manaus Natural Gas Pipeline System: A construction consortium composed of Camarga Correa, OAS and Andrade-Gutiérrez admitted to paying kickbacks of R\$ 15 million on total contracts of approximately R\$ 1.5 billion. The total amount of fraud might be larger, however, because in 2007 a Petrobras petroleum engineer, now deceased, denounced over-billing equivalent to fifty per cent of the

^{*} PAC-1@ R\$500 billion between 2007 and 2010, and PAC-2 @R\$1,600 billion 2011–2015; delays caused the two phases to overlap and the second phase was still being executed in 2018 when the programme was terminated. Source: https://noticias.uol.com.br/especiais/pac/ultnot/2010/03/29/governo-lanca-pac-2-para-investir-r-159-trilhao-e-impulsionar-campanha-de-dilma.jhtm

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Table 6.5: Infrastructure budget (2007–2017) for the PAC in the eight states of the Legal Amazon that would have been exposed to the predatory practices of the Cartel de Empreiteiros.

| Sector | R\$ million |
|--|-------------|
| Regional Transportation Infrastructure | |
| Highway Maintenance | 14,353 |
| Highway Construction | 12,221 |
| Hydrovia | 2,039 |
| Rail | 505 |
| Ports (Marine) | 215 |
| Airports | 133 |
| Urban Infrastructure | |
| Neighborhoods | 1,218 |
| Sanitation | 1,272 |
| Potable Water | 366 |
| Urban Transport | 138 |
| Flood Control | 56 |
| Sports | 29 |
| Agriculture (Irrigation) | 378 |
| Tourism | 80 |
| Total | 33,004 |

Source: PAC 2018.

total budget of R\$ 2.5 billion, which by 2014 had increased to more than R\$ 4.5 billion.²³⁰

 Madeira hydropower complex: These two dams were built and operated by two separate consortia. Santo Antônio Energia* was built largely by Odebrecht, which has admitted paying bribes to politicians who supported the project.† Energia Sustentável do Brasil* was built by Tract-

^{*} Santo Antônio Energia: Odebrecht, SAAG Investimentos, Furnas Centrais Elétricas, CEMIG and Caixa- FIP.

[†] Former presidential candidate Aécio Neves (PSDB), the former President of the Chamber of Deputies Eduardo Cunha (PMDB), Deputy Arlindo Chinaglia (PT), Senator Romero Jucá (PMDB), Deputy Sandro Mabel (PMDB), Senator Valdir Raup (PMDB), Senator Edison Lobão (PMDB) and the governor of Rondônia, Ivo Cassol of Rondôni (PP). Source: https://www.ihu.unisinos.br/categorias/186-noticias-2017/566689-propina-em-usina-no-rio-madeira-foi-de-r-80-milhoes

Energia Sustentável do Brasil, shareholders include Engie (formerly Tractebel),
 Mitsui, Eletrosul Centrais Elétricas and Companhia Hidro Elétrica do São Fran-

ebel, a French company that was not directly implicated in the *Lava Jato* scandal. Nonetheless, the fair value of the contract has been questioned following the revelation of campaign contributions of approximately R\$ 1.8 million made by Tractabel to the Rousseff re-election campaign in 2014.²³¹

- Belo Monte hydropower facility on the Xingu: Andrade Gutiérrez, Camargo Corrêa and Odebrecht pleaded guilty to kickbacks of R\$ 150 million out of a R\$ 2.6 billion contract.²³² Payments were funneled to Senators Renan Calheiros (PMDB), Edison Lobão (PMDB), Valdir Raupp (PMDB), Romero Jucá (PMDB), Jader Barbalho (PMDB) and Delcídio do Amaral (PT). The charges against all five defendants were dismissed in 2023 following a judgment by the *Tribunal Supremo Federal* that prosecutors had acted inappropriately during the investigative phase of the prosecution.²³³
- Amazonian Highways: The Cuiabá Santarem highway (BR-163) was paved at a cost of ~R\$ 2 trillion (US\$ 400 million); the ongoing improvement of the Transamazônica (BR-230) was budgeted at ~R\$ 1.3 trillion (US\$ 260 million); BR-364 in Acre was allocated R\$1.1 trillion (US\$ 230 million), and the ongoing pavement of BR-319 between Humaitá and Manaus received ~R\$466 million (US\$ 95 million).

Lava Jato in the Andean Amazon

The infrastructure investments in Brazil occurred simultaneously with a similar construction boom in Peru financed by multilateral investment banks via the *Iniciativa para la Integración de la Infraestructura Regional Sudamericana (IIRSA) (See* Chapter 2). These investments in basic infrastructure were built by five members of the Brazilian cartel (Odebrecht, Andrade-Gutiérrez, Camargo-Corrêa, OAS, Queiroz Galvão), and Peru's largest domestic construction company (Graña & Montero).

Odebrecht was the most active and participated in several high-profile projects not only as a contractor, but also as an investor and concessionaire. These investments were made using the public-private partnership model promoted by the IDB, where the corporate partner raises the financial capital for construction in exchange for long-term management contracts. The companies met their investment obligations by borrowing money; because of an idiosyncrasy of international bond markets, however, the securities were classified as sovereign debt. Cost-overruns plagued every project and at least one was canceled, which has piled billions of dollars of debt onto the country's sovereign balance sheet. ²³⁴

The Peruvian government estimates Odebrecht overcharged by at least US\$ 283 million on contracts between1998 and 2015;²³⁵ however, independent sources place that number at ~US\$ 1.3 billion – approximately

nine per cent of the debt associated with the various projects worth US\$ 17 billion.²³⁶ The scandal calls into question multiple contracts over several decades, among them high-profile infrastructure projects in the Peruvian Amazon, including:

- Corredor Interoceánico Sur. Built between 2005 and 2008 at approximately double the estimated cost of US\$ 1.2 billion; this IIRSA-sponsored initiative was financed by the IDB, BNDES and Odebrecht, which was awarded a 25-year operating concession.
- Corredor Interoceánico Norte. Built between 2005 and 2013 at a cost of US\$ 1.2 billion; this IIRSA initiative was financed by the IDB, CAF and Odebrecht, which was awarded an operating concession lasting 25 years.
- Both contracts were awarded during the administration of President Alejando Toledo (2001–2006), who has been accused of accepting a US\$ 20 million bribe. Odebrecht (now Novonor) continues to operate both concessions, one of which is profitable (Norte) and one of which is not (Sur).²³⁷
- Central Hidroeléctrica Chagalla. This hydropower facility on the upper Huallaga River was built between 2010 and 2016 with a total investment of US\$ 1.2 billion. The project was approved during the government of Alan García and financed by the IDB and BNDES. In 2017, Odebrecht sold its interest to a Chinese company for US\$ 1.3 billion, presumably to reduce the debt on its balance sheet and prepare for its reorganisation under Brazil's bankruptcy laws.²³⁸
- Gasoducto Sur Peruano was a US\$ 7.4 billion project that was supposed to integrate southern Peru and northern Chile with the gas fields of Camisea. The concession was awarded in 2015 to a consortium composed of Odebrecht, Graña & Montero, and a Spanish energy company (ENEGAS). Odebrecht pled guilty to paying a US\$5 million bribe to an executive of Petroperú and, allegedly, to then-President Ollanta Humala (2011–2016). The allegations of graft forced the government of Pedro Pablo Kuczynski to cancel the project in 2017.²³⁹ In an audacious move, Odebrecht (now Novonor) sued the Peruvian state in 2020 for breach of contract and is demanding indemnification of US\$ 1.2 billion.²⁴⁰

According to the US Department of Justice, Odebrecht paid US\$ 29 million in bribes to at least two and possibly four of Peru's recent presidents. ²⁴¹ In 2018, Alejandro Toledo was indicted on charges of extortion and bribery, followed by similar charges against Alan García, Ollanta Humala and Pedro

Culture and Demographics Define the Present



All photos: Office of The Presidency of Peru via Wikimedia (CC BY-SA 4.0/2.0).

Four Peruvian presidents implicated in the Odebrecht bribery scandal as of January 2024. Upper left: Alejandro Toledo is incarcerated while awaiting trial after being extradited from the United States. Upper right: Ollanta Humala is under house arrest while awaiting the finalisation of his trial. Lower left: Alan García committed suicide while being served an arrest warrant in 2019. Lower right: Pedro Pablo Kuczynski is under house arrest while awaiting the finalisation of his trial.

Pablo Kuczynski.* Odebrecht also made contributions to the leading opposition candidate, Keiko Fujimori, who is being tried for money laundering and other crimes.²⁴²

Ecuador terminated all government contracts with Odebrecht in 2008 following a dispute related to overbilling on the San Francisco Hydroelectric Power Plant; the company negotiated a return in 2010 by bribing the vice president with US\$ 33.5 million, a sum hidden within its contract bid to construct a refinery for Peteoecuador.²⁴³ The payoff, which was revealed in a US courtroom, was a precursor of an additional US\$ 150 million in fraudulent charges between 2011 and 2015 at five mega-projects that were originally contracted at US\$ 1.4 billion.²⁴⁴ These and other bribes were revealed in 2017 in the *Escándalo de Sobornos*, which led to the incarceration of the Odebrecht's chief of operations and the former vice president who had solicited the bribe (Jorge Glas); the graft was approved with the knowledge and assent of then-President Rafael Correa, who was convicted in absentia and is currently living in exile in Belgium.

Brazilian construction companies began operating in Bolivia in 1987 as the country emerged from a period of economic instability when multilateral agencies provided special assistance loans for infrastructure projects. Andrade Gutiérrez was awarded several contracts that, although never subject to a serious investigation, were reported to have been awarded via a flawed, non-transparent bidding process. Odebrecht has adjudicated only one small project in Bolivia, and it was not implicated in the criminal case brought by the US Department of Justice. Nonetheless, declarations by defendants employed by Odebrecht in Peru and OAS in Brazil have alluded to payments made to Bolivian officials.²⁴⁵

The most controversial project was awarded to OAS, which submitted an uncontested US \$400 million bid to build a road that would transect the *Territorio Indígena y Parque Nacional Isiboro-Sécure* (TIPNIS).²⁴⁶ This project, which was to be financed by BNDES, was put on hold when the Indigenous inhabitants of TIPNIS voted to reject the project (see Chapter 11).²⁴⁷ The government continues to insist that construction will move forward and has worked to change the decision made by the communities within the TIPNIS.[†]

^{*} As of August 2023, Alejandro Toledo (77) was imprisoned after being extradited from the United States in May 2023; his trial began in October 2023. Alan Garcia committed suicide in 2019 when prosecutors moved to arrest him. Ollanta Humala (61) was jailed briefly in 2017 and is in the final stages of his trial. Pedro Pablo Kuczynski (85), who resigned the presidency in 2018, is under house arrest during his trial for money laundering. Source: *The New York Times*.

[†] This conflict pits highland Indigenous, Quechua-speaking, migrants against lowland Indigenous *Moxeña* communities that have been granted title to the TPINIS reserve.

China and the Fake Baby Scandal

In the last decade, the Pan Amazon has seen a substantial increase in the presence of Chinese companies, either as direct investors or as contractors building infrastructure for governments financed by loans from China. The lack of transparency that characterises their homeland fosters an environment that allows Chinese companies to escape scrutiny. Many analysts assume their contracts have been tainted by bribes and kickbacks, an assumption based on Chinese and Latin American reputations for corruption. Very few scandals have been exposed by the press, however, and most of the purported malfeasance is based on conjecture of what constitutes a good deal and a fair price. Nevertheless, there are several exceptions.

In 2016, an unusual set of circumstances transpired to reveal a bribery network in Bolivia that linked a major Chinese construction company with functionaries in the Bolivian government. China CAMC Engineering (CAMC), a subsidiary of the China National Machinery Industry Corporation (SINOMACH), had signed contracts with the Bolivian government for approximately US\$ 576 million,²⁴⁹ including:

- The sale of three oil drilling rigs in 2009 to the state-owned *Yacimientos Petrolíferos Fiscales Bolivianos* (YPFB) for US\$ 60 million.
- The design and construction of a sugar mill in San Buenaventura, La Paz, for a state-owned commodity company (*Empresa Azucarera San Buenaventura*) for US\$ 167 million in 2012.
- The construction of the Bulo Bulo–Montero railway to connect the rail network with a urea factory in the Chapare, a project that was abandoned in 2015 after the company received a down payment of US\$ 20 million on a total bid of US\$ 104 million.
- The Misicuni dam and reservoir in Cochabamba for US\$ 70 million in 2015; cost overruns eventually added another US\$ 48 million to the project which was finished in 2017.
- A potassium fertiliser plant in Potosí for US\$ 179 million built between 2015 and 2018.

The YPFB purchase was financed by a loan from the ExIm Bank of China, while the others relied on funds from the Central Bank of Bolivia. ²⁵⁰ In other words, CAMC was competing with Bolivian and Brazilian companies and could not depend upon the political leverage of a Chinese bank that could condition the loan on the procurement of Chinese goods and services.

The scandal that enveloped these contracts had nothing to do with an audit or an anti-corruption investigation; instead, public attention was focused on a former girlfriend of President Evo Morales, who was hired by CAMC as a senior executive in their Bolivian subsidiary. The woman, Gabriella Zapata, had no obvious qualifications; however, she had in her possession a birth certificate that showed Evo Morales to be the father of her child, which she used to gain influence with her superiors at CAMC and with government functionaries.

Her influence evaporated when it was revealed that the child did not exist and that she had hood-winked the president into signing a fraudulent birth certificate. The exact amount of money that was diverted into kickbacks has never been ascertained, but a five per cent commission would have generated about US\$ 30 million. Ms Zapata initially threatened to implicate senior government officials, but eventually confessed to document fraud and assumed responsibility for the imbroglio. As of January 2024, she was serving a ten-year sentence in a Bolivian penitentiary. ²⁵¹

There has also been allegations of bribery by CAMC in Peru where the *Ministerio de Energía y Minas* signed a contract in January of 2023 to build an electrical grid in Amazonas state for US\$ 31 million.²⁵² Evidence of wrongdoing has been uncovered in Ecuador, where the company was awarded a series of contracts between 2012 and 2018 to build several state security service offices, five state-of-the-art hospitals and an urban housing project for a total of US\$ 850 million. A money laundering investigation in the United States revealed that CAMC had paid US\$1.3 million to the brother of the comptroller (Pablo Celi de la Torre), who allegedly manipulated the public contracting system to favour the company.²⁵³

An even higher-profile scandal involves Sinohydro, the Chinese company that built the Coca Codo–Sinclair hydropower facility between 2005 and 2016 and Lenín Moreno, who served as vice president (2007–2013) and president (2017–2021). The bribes were allegedly made to Moreno's family via intermediaries in Panama while the country was negotiating the settlement of more than US\$ 1.9 billion in cost overruns associated with the controversial dam located on the Río Coca in Amazonian Ecuador (see Chapter 2). On 5 March 2023, the attorney general formally accused Moreno, his wife, two daughters, a son and fourteen co-conspirators of defrauding the state for a total of US\$ 76 million.²⁵⁴

Just as the *Lava Jato* case revealed the ubiquity of the kickback system encrusted within the Brazilian construction cartel, these examples show the potential scale of corrupt practices associated with Chinese companies. In Bolivia, their criminal activity was exposed by happenstance, and the subsequent penalty had nothing to do with the crime of embezzlement. In Ecuador, the crimes were uncovered by internet hackers, but the criminal

^{*} The president's image was seriously damaged and he 'lost' a referendum on 21 Feb. 2016 that would have modified the Constitution to allow him to stand for a third term in office.

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President Rafael Correa and his Vice President, Jorge Glas (top), were convicted of bribery and money laundering linked to the Odebrecht scandal. Lenin Moreno (bottom right), who succeeded Correa, has been accused of accepting a bribe from a Chinese construction company (Sinohydro). All three politicians were indicted by the Fiscal

General, Diane Salazar (bottom).

charges were brought by an attorney general, Diana Salazar, first in her role as a prosecuting attorney and then as the country's attorney general.²⁵⁵

Corruption is a cultural trait common to all human societies; none-theless, some nations have managed to control it better than others. They have succeeded because they have adopted governance mechanisms that fortify their institutions, ensure transparency in state operations and enjoy judicial systems that hold individuals responsible for acts of malfeasance (see Chapter 7).

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Annexes

 $Annex\,6.1: The\,treaties\,that\,adjudicated\,boundary\,disputes\,among\,the\,Amazonian\,states$

| Year | Treaty Name | Parties | Key Attributes |
|------|---|-------------------------|--|
| 1494 | Tordesillas | Spain and Portugal | Adjudicated conflicts over lands discovered by late fifteenth-century voyagers by establishing a line of demarcation (46°30′ W) that would recognise Brazilian claims in coastal Brazil and Africa, and Spanish claims in the Caribbean, Central America and Andes. |
| 1713 | Utrecht | France and Portugal | Recognised Portuguese sovereignty over the territory between the Amazon and Oiapoque rivers (current day Amapá). |
| 1750 | Madrid | Spain and Portugal | Adjudicated boundary claims allocating (most of) the Amazon basin to Portugal, including sovereignty over the Tocantins, Xingu, Tapajos and lower Madeira rivers. |
| 1777 | Ildefonso | Spain and Portugal | Recognised that possession was the primary legal basis for determining territorial sovereignty in colonial America (<i>uti possidetis</i>), which formalised Portuguese control over the Solimoes portion of the Amazon River. |
| 1801 | Badajoz | Spain and France | Established the area between the Amapari and Oiapoque rivers as belonging to France; a measure imposed by Napoleon Bonaparte as part of a settlement to end the <i>Guerra das Laranjas</i> . |
| 1851 | Comércio, Navegação, Limites | Brazil and Peru | Recognised Tabatinga as a Brazilian settlement and established the Apaporis–Tabatinga line (north from Tabatinga) and the Javari River (south from Tabatinga) as the border between the two nations. |
| 1859 | Definitivo de Limites entre o Brasil e Venezuela | Brazil and Venezuela | Recognised an approximate boundary from the triple point separating Brazil, Colombia and Venezuela on the Rio Negro to the triple point separating Brazil, Guyana and Venezuela on the summit of Mount Roraima. |
| 1867 | Ayacucho | Brazil and Bolivia | Established the border from the Paraguay River to the source of the Rio Verde, a tributary of the Rio Guaporé, and then downstream to the Mamoré and Madeira until 10° 20' S, then in a line northwest to the headwaters of Rio Javari, which explicitly ceded to Brazil the northern portion of Bolivia's territorial claim based on the Treaty of Ildefonso. |

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| Year | Treaty Name | Parties | Key Attributes |
|------|---------------------------------|----------------------------|---|
| 1876 | Acordo de Navegação Livre | Brazil and Peru | Established the free navigation on the Rio Putumayo (Peru) and Içá (Brazil), which formalised that river as a boundary between the two nations. |
| 1900 | Arbitration (Switzerland) | Brazil and France | Boundary dispute with Brazil recovering the territory from the Rio Araguari River to the Rio Oiapoque (current day Amapá), |
| 1904 | Arbitration (Italy) | Brazil and Guyana | Boundary dispute with decision favouring the United Kingdom by recognising British (and later Guyanese) sovereignty over the region along its southern border near Mount Roraima. |
| 1903 | Petropolis | Brazil and Bolivia | Ceded the territory of Acre to Brazil and established the Rio Abunã as the border between the two countries west of the Madeira River, while obligating Brazil to build a railway from Porto Velho to Guajará-Mirim and guaranteeing free navigation for Bolivian ships on the Madeira and Amazon rivers. |
| 1904 | Limites | Brazil and Ecuador | Recognised the Rio Putumayo as the border between Brazil and Ecuador's putative claim to the Maynas region (current day Loreto). |
| 1906 | Limites | Brazil and Netherlands | Established borders based on the upper extent of coastal watersheds. |
| 1907 | Vásquez Cobo – Martins | Brazil and Colombia | Established an idiosyncratic border separating the upper watersheds of the Rio Negro and Río Orinoco between the point separating Venezuela, Colombia and Brazil on the Río Negro to the mouth of the Rio Apaporis on the Río Caquetá/Japurá. |
| 1909 | Polo – Bustamante | Brazil and Peru | Bolivia recognised Peruvian sovereignty over territories in the upper basin of the Río Madre de Dios and Río Purús, while Peru recognised Bolivian sovereignty over the Acre watershed, some of which had already been ceded to and occupied by Brazil. |
| 1909 | Rio de Janeiro | Brazil and Peru | Delineated the border between Acre (Brazil) and the Peruvian provinces of Ucayali and Madre de Dios (Peru) |
| 1916 | Muñoz Vernaza – Suárez | Colombia and Ecuador | Ecuador renounced its claims to the territories between the Caquetá and the Napo rivers in favour of Colombia, while recognising Colombia's frontier with Brazil was the Apaporis–Tabatinga line, which had previously been recognised by Brazil and Peru (1851). |

| Year | Treaty Name | Parties | Key Attributes |
|------|-----------------------------------|----------------------------|--|
| 1922 | Salomón – Lozano | Colombia and Peru | Peru recognised Colombian sovereignty over the territory between the Río Caquetá River and the Río Putumayo, as well as the area known as the Trapézio Amazónico between the Putumayo and Amazon rivers. |
| 1928 | Orrtiz - Mangabeara | Brazil and Colombia | Ratified the Apaporis–Tabatinga line as the border spanning the lands between Caquetá and Amazon rivers, which had previously been recognised by Brazil and Peru (1851), and Brazil and Ecuador (1904). |
| 1928 | Tratado Natal | Brazil and Bolivia | Adjudication of minor border disputes in the Bolivian Departments of Pando, Beni and Santa Cruz. |
| 1934 | Rio Protocol | Colombia and Peru | Recognised Colombian sovereignty over Leticia and ratified the territorial agreement previously agreed to in the Salomón – Lozano treaty (1922). |
| 1934 | Ulloa-Viteri Accord | Ecuador and Peru | Recognised a status quo border based on the effective possession of territory occupied by each country, without Ecuador formally recognising Peruvian sovereignty. |
| 1936 | Tri Junction Agreement | Brazil, UK, Netherlands | Establishing the borders between Brazil, Suriname and Guyana |
| 1942 | Rio Protocol | Ecuador and Peru | Ecuador agreed to withdraw its long-standing claim for rights for territorial access to the Marañon and Amazon rivers; Peru agreed to withdraw its military forces from Ecuadorian territory |
| 1958 | Roboré Agreements | Brazil and Bolivia | Adjudication of minor border disputes in Beni and Santa Cruz |
| 1995 | Itamaraty Peace Declaration | Ecuador and Peru | Ecuador ratifies the Rio Protocol of 1942. |
| 1999 | Fujimori– Mahuad | Ecuador and Peru | Adjudication of minor border disputes within Condor National Park. |

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Culture and Demographics Define the Present

Annex 6.2: The major infrastructure projects and settlement zones in the Peruvian Amazon.

| Corridor Name | Terminus and hubs | River Basin | Highway designa- tions | Production system | Notes |
|---|--|--------------------------------------|--|--|---|
| Corredor Inter- oceánico – Norte | Yurimaguas, Tarapoto, Moyobamba Saramiriza, Bagua Huancabamba | Mayo/ Huallaga Marañón | PE-5NA PE-5NC PE-2B (Andes) PE-1N (Coast) | Irrigation agriculture Food crops Palm oil Cacao | Pre-Inca route used by missionaries in the 16th century via intermontane valleys and Huancabamba gap. Access to <i>Oleoducto</i> <i>Norperuano</i> (Sarmiriza). |
| | Piura | | | | Access to Amazon waterway (Yurimaguas) |
| Corredor Inter- oceánico – Central (Carretera Federico Basadre) | Pucallpa Tingo María Cerro de Pasco Lima | Ucayali Upper Huallaga | PE-18 PE-18A PE-18C | Coffee Palm oil Coca Cacao | Links coast with mining district and the Amazon River system. Most densely populated colonisation landscapes |
| Carretera Marginal de la Selva (Carretera Ferdinando Belaunde) | Tingo Maria Tarapoto Jaen Yurimaguas | Upper and Lower Huallaga | PE-5N PE05NB | Small farmers Corporate oil palm Coffee Coca | Towns along this corridor are now a staging ground for the settlement of the landscapes located between Yurimaguas and Pucallpa |
| Corredor Inter- oceánico – Sur | Ilo/ Moquegua Puno/Cuzco Puerto Maldonado Acre/Pando. | Madre de Dios | PE-30C PE-30D | Gold mining Brazil Nuts Ecotourism | Connect to Rio Madeira section of the Amazonian Hidrovia. Links to the Brazilian and Bolivian highway system |
| Upper Río Inambari | Sandia San Juan del Oro Juliaca | Río Inambari/ Madre de dios | PE-34H | Coca Wildcat gold | Cloud forest habitat on the western slope Cordillera in the department of Puno. |
| Con- vención – Lares | Cuzco | Urubamba Ucayali tributaries | PE-28B | Coca | Tropical valleys located downstream from Machu Picchu on the Río Urubamba |

Annexes

| Corridor Name | Terminus and hubs | River Basin | Highway designa- tions | Production system | Notes |
|--|---|---------------------------------|------------------------------|----------------------|--|
| Valle de los Ríos Apurínac, Ené y Mantaro (VRAEM) | Ayacucho | Upper Ucayali tributaries | PE-28B AY-101 | Coca | Montane forests on the border between Ayacucho and Cuzco where an estimated 70% of Peru's coca is produced |
| Selva Central | Oxapampa Perené Satipo Gran Pajonal Atalaya | Upper Ucayali tributaries | PE-22 PE-5S PE-5SA | Timber Coffee | One of the first colonisation zones dedicated to the cultivation of coffee. Connect with Pucallpa via Oxapampa and Perené and Atalaya via Gran Pajonal. |

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