

Chapter 11 In Brief

Economic drivers in the Amazon from the 19th century to the 1970s



Gado e visto em área de fazenda próximo a floresta (Foto: Bruno Kelly/Amazônia Real)



THE AMAZON WE WANT
Science Panel for the Amazon

Economic drivers in the Amazon from the 19th century to the 1970s

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Key Messages & Recommendations

- 1) During the 19th and 20th centuries increasing international demands led to boom and bust cycles for various natural products such as *quina* and rubber. Mining of gold continued, and the discovery and drilling for oil began, activities which continue to this day. Some products gave way to others, as in the shift from *quina* to rubber, and from rubber to the Brazil nut.
- 2) Extraction of natural resources always occurred with government support, and the backing of national and foreign investors. These industries took advantage of Indigenous labor, often in exploitative and abusive conditions. At the beginning of this period, as in previous centuries, rivers were the means of access to the Amazon, but starting in the 20th century roads and highways increasingly opened up access.
- 3) We must learn from the experiences of Indigenous peoples, who have successfully managed, shaped, and guarded natural resources in the region for thousands of years, as well as from local communities. Developing economic models that avoid asymmetric exploitation practices, such as debt-peonage, is a major challenge.
- 4) Various Andean Amazonian products have generated enclave economies, with boom-and-bust cycles over several centuries. Economic activities must be carried out sustainably over time, guaranteeing the long-term well-being of Amazonian communities.

Abstract This chapter identifies the main economic processes that occurred in the Brazilian, Andean,

and Guyanese Amazon from the 19th century until the 1970s. Specifically, the chapter describes the history of extractivism and the effects of geopolitical reconfiguration on the Amazon after the process of emancipation or decolonization. It analyzes the extraction of *quina* barks (species of the genus *Chinchona*, Rubiaceae) and rubber (*Hevea brasiliensis*, Euphorbiaceae), as well as the resulting characteristics and practices developed by social actors related to the local and regional economy. It also describes the history and emergence of exploitation of oil and minerals (mainly gold), including the beginning of wildlife trafficking and the emergence of mechanized agriculture, intensive livestock, and mega-infrastructure. Finally, there are opportunities for the use of “historical commodities” of the Amazon, such as the Brazil nut (*Bertholletia excelsa*, Lecythidaceae), based on the need to add value to these natural products. These opportunities can be the basis of new models based on a so-called bioeconomy.

Introduction Over the last two centuries, the Amazon’s oil, minerals, and biodiversity have been used intensively as a result of national and international economic interests. Since the early 1960s, the predominant perception among national governments was that Amazonian territories were empty, “unused” spaces, with formidable reserves of natural resources (e.g. minerals, oil, hydroelectric energy, wood, agri-culture, and plants for pharmaceutical and cosmetic uses) and with their sovereignty at risk¹⁻³. This chapter summarizes the main historical

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processes as economic drivers that shaped the current landscape and the diversity of socio-ecological systems in the Amazon.

The extractive economy of quina Historically, “quina” or “cascarilla” were the most common names for the plants of the genus *Cinchona*, and some of the genera *Remijia* and *Ladenbergia*, whose barks have medicinal properties including the power to prevent and treat malaria⁴. *Cinchona* bark contains four main medicinal alkaloids: cinchonine, cinchonidine, quinidine, and quinine, the last being the most important. Each species has different concentrations of alkaloids, which can vary even within the same species depending on the locality, altitude, soil type, age of the tree, and time of harvest. Like many other historical and contemporary products, the *quinas* connect the Andes and the Amazon with the world in different periods. This history is made up of religious, commercial, and scientific controversies.

The *quinas* were fundamental in opening up mountain passages towards the Amazon, in addition to strengthening existing ones, and motivating the migration of locals and foreigners to the Amazon. It also changed transportation routes, which were no longer only through the Andes and ports such as Callao, Guayaquil, or Cartagena, but also through the Amazon, via Iquitos or Manaus, boosting local economies.

The extractive economy of rubber Although the natives of the Amazon Basin showed arriving Europeans the uses of rubber products starting in the 16th century, it was not until the discovery of vulcanization in 1839 that its industrial use multiplied and demand boomed. Although rubber production (“the trees that produce gold”⁵) took place in a large number of the countries that make up the Amazon, its history is linked especially to the lowlands of Colombia, Brazil, Peru, and Bolivia.

An extractive economy based on rubber completed the integration of the Amazon into the world economy; however, it depended heavily on shrinking cinchona activities, investment of foreign capital, and a

system of barracks that was gradually consolidated and persisted for decades. It was also later deeply affected by agrarian reform processes, especially in Brazil, Peru, and Bolivia, which reorganized access to forest resources and redistributed land.

Other "commodities" from the Amazon: wildlife and non-timber products In pre-Hispanic times, Amerindian peoples across the American continent engaged in trade in the flora and fauna of the Amazon, with Amazonian peoples managing biodiversity and conservation^{6,7}. However, in the 19th century globalization processes and the promotion of extractive economic models shifted the balance with negative impacts on ecosystems and local populations.

An enormous amount of wildlife from the Amazon region has been exported to the United States, Europe, and Asia to meet commercial demand for leather, skins, and feathers, among other products. This has led to the extinction of several indigenous species and leaves other species under threat. The eight Amazonian countries officially list threatened species of flora and fauna, which number more than 12,000 native species,⁸ including cedars, mahogany, palm trees, lianas, vines, orchids, reptiles, birds, mammals, fish, and frogs. These species are sought after for industrial (food, cosmetic, textile, fashion, furniture), medicinal (pharmaceutical), and ornamental purposes, as well as for the exotic pet market. See Chapters 14 and 18 for discussion of coca.

Although national governments have enacted laws and legal measures have been taken to reduce pressure on native biodiversity, such as the creation of forest reserves and protected areas, the lucrative, uncontrolled, and illegal extraction of wildlife persists^{9–11}.

Gold mining Rumors about the immense natural richness of the Amazon began with the earliest voyages of European conquest^{12–14}. Various Europeans confirmed the existence of metallic and non-metallic mineral deposits, including iron, gold, nickel, silver, coltan, thorium, clay, sand, limestone, bauxite,

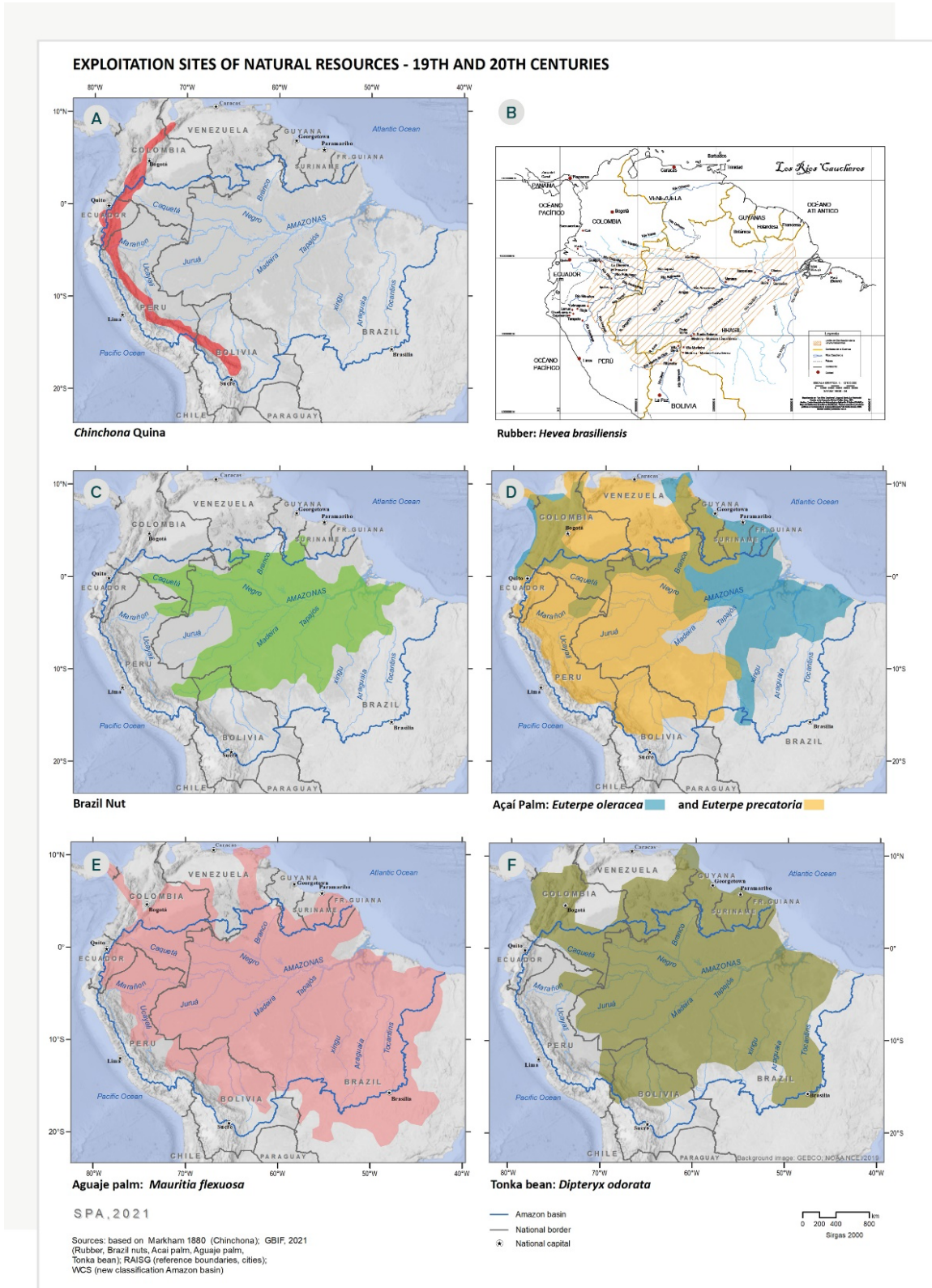


Figure 11.1 Geographic distribution of Amazonian resources exploited during the 19th and 20th centuries. Sources: 32,33,34,35.

diamond, quartz, jade, titanium, dolomite, phosphate, granite, plaster, zinc, and copper¹⁵. Today, legal and illegal gold mining coexist in the Amazon and related legislation has undergone significant modification over the years.

The original inhabitants of the Amazon practiced artisanal forms of mining, although it did not lead to environmental destruction. The ancestors of today's Amazonian Amerindians had expert knowledge of metalworking. They used gold, silver, copper, and alloys of these metals; they made carvings of idols; geometric, anthropomorphic, and zoomorphic figures; and thin sheets of gold which were used as currency^{16,17}.

Oil and gas Oil greatly influenced Amazonian economies during the 20th century, and was essential in the consolidation of previous processes which began with the extraction of *quina*, rubber, and other products. In Latin America, oil is associated with strong feelings of economic nationalism. The political debate has been dominated by both critics and defenders of foreign investment and the participation of multinational corporations, while on the policy side governments have experimented with and switched from open-door arrangements to nationalization or expropriation of foreign-owned assets¹⁸.

Oil exploration in the Amazon dates back to the 19th century. However, it took off in the 1920s in the Bolivian Lowlands (*Oriente*)¹⁹, in 1936 in the Venezuelan *Orinoquia*, in the 1940s in the Colombian Amazon, in the 1960s in the Ecuadorian *Oriente*, and in the 1980s in Peru. Brazil has been a major consumer but a minor producer. These processes were marked by the intervention of international companies, sometimes with the participation of domestic ones, and always in association with national elites.

Intensive cattle ranching Since the 1960s, livestock has been a main driver of massive deforestation^{1,20}. Other drivers include road construction and government-induced settlement programs. Across Latin America, livestock expansion since the mid-19th century has largely involved the transformation

of forests into cultivated pastures²¹. This environmental transformation accelerated in the early 1960s, when national governments implemented policies to integrate Amazonian territories with the rest of the national territories.

Extensive ranching systems also became an important strategy for land grabbers and speculators to convert forests into cultivated pastures and claim unregulated public lands as their own^{1,22}, a process that continues to be an important driver of deforestation today²³.

Despite being profitable, livestock farming in the Amazon during the 1960s faced several problems, such as rapid and extensive degradation of pastures, lack of technical and management expertise among farmers, and insufficient and inadequate technical assistance services^{24,25}. National and international concerns about rising rates of deforestation in the late 1970s led to increasing pressure on governments to change incentive programs encouraging ranching and agriculture in the Amazon^{20,21}.

Large roads and hydroelectric plants Following World War II, there was a gradual reduction of policies promoting extraction of a constant supply of strategic natural resources from the Amazon²⁶. With some exceptions, the focus switched to the provision of financial aid and the implementation of deliberate trade protections to state-led industrialization frameworks²⁷. Two key requirements for industrialization were improvements in transport infrastructure and the regular supply of low-cost energy.

In Brazil, about 100 hydroelectric dams were built in the 1950s, 103 in the 1960s, and 151 in the 1970s. However, the construction of dams on Amazonian rivers has provoked clashes between developers, government officials, Indigenous populations, and environmentalists²⁸. Road construction has also been a key method for national governments to ensure sovereignty and the integration of Amazonian territories into national economies. Brazil began implementing an impressive highway construction policy in the early 1950s, which accelerated after the

1964 military coup. Several of these highways, such as the Trans-Amazonica (BR-230), BR-163, and BR-319, are still under construction and expanding, raising concerns about their environmental and socioeconomic trade-offs^{20,29,30}. This is particularly relevant as the density of roads in one county is associated with increased human migration and deforestation in that county as well as similar side effects in neighboring counties³¹.

Conclusions Demand for raw materials from external markets, located in the industrialized nations of the global North, motivated the economic cycles of the Amazon between the 19th and 20th centuries. They were part of geopolitical and geographical processes driving the emergence and consolidation of Latin American republics. They were characterized by different degrees of government participation, but all resulted in the emergence of powerful elites, and the de-humanization of Indigenous peoples and local communities, who were seen as low-cost or even free labor. These extractive processes continue to this day, with products, especially beef, oil, and soy, produced for export.

The Amazon has witnessed cycles of rise (boom) and fall (bust) in the exploitation of raw materials, which shaped diverse social, economic, and spatial structures, sometimes to the detriment of previous territorial arrangements. Products such as cinchona and rubber led to the opening of waterways, roads, settlements, and cities, as well as migration. Economic booms attracted migrants who gradually took over territories, almost always to the detriment of ancestral populations.

There are two great continuities within the extractive economy from the 19th century to 1970; 1) a neocolonial or postcolonial system derived from the extraction of raw materials, based on enslaved or recruited cheap labor, for export, and 2) the management of lowland forests and ancient tropical savannas by Indigenous, Afro-descendent, and in some cases peasant peoples. Without identifying, revaluating, and adopting the important contributions of Indigenous knowledge and practices to the management of the Amazon, and transitioning to an

economic model based on its extraordinary biodiversity (bioeconomy), the region will continue to suffer from the legacy of the colonial system, which today implies the irreversible destruction of the Amazon's forests and other ecosystems.

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