Chapter 18 In Brief

Globalization, extractivism, and social exclusion: Country-specific manifestations

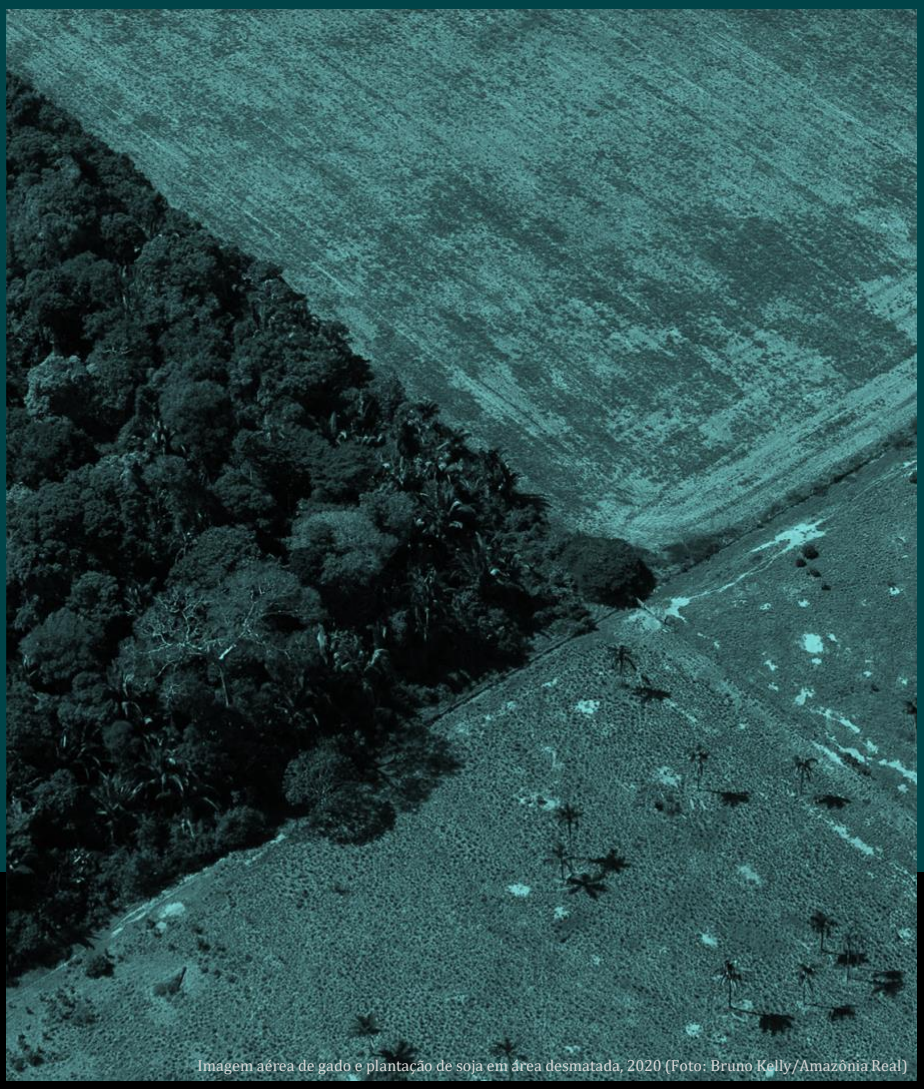

Imagem aérea de gado e plantação de soja em área desmatada, 2020 (Foto: Bruno Kelly/Amazônia Real)

THE AMAZON WE WANT
Science Panel for the Amazon

Globalization, extractivism, and social exclusion: Country-specific manifestations

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Key Messages & Recommendations

1) Differentiated local manifestations of deforestation and forest degradation are particular to national and local contexts, as a function of their local, natural, and historical, social, political, and economic conditions. In designing policies and programs, context matters. There are no one-size solutions applicable to all countries or even to all of Amazonia within the same country.
2) States have been key players in determining the type and scale of human intervention in the Amazon, through concrete action or omission. It is necessary to redefine state policies so that forest conservation and human welfare are prioritized across all Amazonian policies. Governments must implement positive actions (policies, rules and regulations, enforcement, etc.) to drive sustainable development in the Amazon.
3) Two antagonistic ideas have predominated as models for the region, "extractivism" and "conservation". The current Amazonian development model is not sustainable, and the transition to an alternative path is necessary. A new model must achieve forest conservation and meet the self-determined welfare objectives of Indigenous and local communities, redefining economic activity that is sustainable in the long term.
4) The Amazon is characterized by severe social inequality, particularly unequal land distribution; when coupled with land tenure irregularity, this hinders sustainable development. The disproportionate impact of COVID-19 on the most vulnerable populations, in particular Indigenous peoples, is a clear example.
5) The transition to a low emission sustainable development path must include effective policies to reduce inequalities and involve the just distribution of land and regularization of tenure, coupled with social policies that help maintain ties to the land and enhance the ability to obtain good standards of living.

Abstract This chapter presents country-specific descriptions of human intervention in the Amazon, including the expansion of agricultural and extractive activities. The analysis contains two comprehensive national cases (Colombia and Ecuador) and three short studies focused on public policies (Peru, Bolivia and Venezuela). The Brazilian experience reducing deforestation is presented in Chapter 17.

Introduction Human intervention in the Amazon accelerated since the 1970s, threatening the rainforest and the survival of its diverse Indigenous peoples and local communities (IPLCs). The rapid expansion of agricultural and extractive activities, geared mostly to export but also to supply domestic markets, drove significant deforestation and environmental degradation without substantially improving the living conditions of the population.

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This chapter explores national experiences, which differ not only by the magnitude of environmental deterioration, but also by their specific drivers[1]. With 58% of the Amazon rainforest area in 2000, Brazil accounted for 77% of primary forest tree cover loss across all Amazonian countries between 2001 and 2020. The bulk (89%) of deforested land in Brazil's Amazon was transformed to pastures, and 9% to soy cultivation. Brazil also has the majority of the Amazon's large-scale mining operations, particularly for iron ore. Primary tree cover loss was also intense in Bolivia (7.5%), which closely follows Brazil's case (7.8%). Peru, Colombia, and Ecuador have lower primary forest losses (3.2%, 3.1% and 1.9%, respectively). Commercial agriculture plays an important role as a driver in Peru and Colombia, while oil extraction was the main indirect driver in Ecuador. A third group of countries and territories with low forest loss are Venezuela (1.4%), Suriname (1.1%), Guyana (0.79%), and French Guyana (0.65%), which faces significant impacts from gold mining[33-35].

Colombia Approximately 43% of Colombia is located in the Amazon, making Colombia one of the five megadiverse countries in the world. In 2018, the Colombian Supreme Court of Justice declared that the Colombian government must create a concrete mechanism to protect the Amazon[2]. However, in the 21st century, 5.7% of Colombia's forested areas (4.34 million ha) and 3.1 % of the country's primary forests have been cleared[33].

The Colombian Amazon was a stronghold of the FARC-Guerrilla[3,4], which slowed deforestation. The FARC preserved the forest as a natural barrier for their own protection against incursion, while the presence of armed groups curbed development and related forest clearing in the region[5,6]. The signing of the peace agreement in 2016 reduced armed violence and accelerated development, and in turn deforestation, in the region, a trend which also applies to protected areas and Indigenous territories.

Extensive cattle ranching is by far the most important driver of deforestation in Colombia[7], and is linked to the illegal drug economy. Clearing forest for coca production is often followed by livestock farming, and land transactions are a preferred form of laundering drug money[3,8]. Colombia has a diversified extractive economy, and other important drivers of deforestation include oil production, mining, and monocultural agriculture.

Coca cultivation is an important driver of deforestation[9,10], has risen sharply in recent years, and is increasingly found in Amazonian regions[11]. Additionally, aerial spraying with glyphosate defoliant to prevent coca cultivation has worrying environmental consequences for the forest[12,13]. Other drivers of deforestation include infrastructure projects, particularly road projects to open up the region for development, hydroelectric generation[14], and expansion of the agricultural frontier by smallholders and peasants.

The Colombian government aims to address deforestation and climate change. However, data from Global Forest Watch show that this does not occur. Although the deforestation rate declined in 2019, data for 2020 show it once again skyrocketed[15]. In general, deforestation is well above pre-2016 levels. Moreover, deforestation takes place in protected conservation zones of National Natural Parks, an especially worrisome trend[16]. The government's emphasis on the protection of the Amazon forest as part of its commitment to curb climate change is arguably contradictory to its extractive development strategy. According to Global Witness, Colombia is the most dangerous place for environmental activists, who face criminalization, threats, violent attacks, and assassinations, with Indigenous groups being especially vulnerable[17].

The solution in Colombia is a shift away from extractivist development models and the construction of viable alternatives and economic diversification[18]. Secondly, the country needs to reduce extreme inequalities in land tenure[19]. Thirdly, alternative ways to tackle the problem of illicit drugs are very much needed[20].

Box 18.1 Successful conservation experiences in Colombia and Bolivia

In the Department of Guaviare, Colombia, forest has been cleared for cattle ranching, timber, and plantations that are not biodiverse. The application of an agro-environmental approach developed by SINCHI Institute (an NGO implementing state-sponsored policies) in Guaviare began with participatory workshops with families. Families agreed to halt deforestation and expansion of agricultural land in exchange for financing for other, more sustainable, productive enterprises, such as asaí, canangucha, and seje harvesting. Between 2017 and 2019, 1,046 families, representing 32,446 ha, signed agreements [31].

In the Bolivian Amazon, the sustainable harvesting of Brazil nuts represents the main economic driver of the region[32] High prices and international demand for Brazil nuts has limited conversion of the forest to pasture for livestock. Most of the land in the Bolivian Amazon belongs to Indigenous territories and other rural communities which represent the base of the Brazil nut production chain and that of emerging commodities such as açai. A challenge that remains to be addressed is the spillover of informal gold mining on the Madre de Dios River, which requires clear policies and decisions[34,35].

Ecuador Although the country has a small share (1.6%) of the Amazon rainforest, Amazonian provinces account for 47% of Ecuador's national territory and hold some of the most biodiverse parts of the forest, particularly in the upper Napo basin and Yasuni National Park[21,22]. In 1967, large oil reserves were discovered in the northern Amazon, and since 1972 Ecuador has been an oil exporter. Oil has contributed little to equitable and sustainable development, despite bringing about significant economic, social, and institutional transformations. Social, ethnic, and regional disparities remain pervasive, with 30% of the population living below the poverty line, and underemployment affecting 40% of the labour force in 2017[23]. Oil extraction drives deforestation, loss of biodiversity, pollution, and human health hazards[24–26]. Efforts to diversify the economy have failed, and with a heavy debt burden and limited oil reserves the county is currently affected by a deep economic, social, and political crisis[27].

Although resource-extraction prevailed, conservation concerns have resulted in the creation of protected areas, partial recognition of Indigenous territories, recognition of the rights of nature, and inclusion of the "good living" concept in the 2008 constitution[28]. Protected areas cover 20% of Ecuador's territory. The most important in the Amazon are Yasuni National Park and the Cuyabeno Reserve, both established in 1979, but with oil extraction permitted since the 1980s[29]. Indigenous territories cover a large proportion of the Ecuadorian Amazon, about 3 million ha, with about 70% of them legally recognized in the form of collective property rights. Nevertheless, the legal competences of Indigenous territories are weak, and several oil and mining concessions have been granted on Indigenous lands without properly consulting Indigenous peoples.[g]

Expansion of oil and mining operations is the most important driver of deforestation and degradation in Ecuador. In 2018, 16.2% of original Amazonian forests in Ecuador were deforested [30]. Unlike in Brazil, Colombia, and Peru, urbanization in the Ecuadorian Amazon has been moderate and deforestation is mostly undertaken by small-scale farmers moving into the region along roads constructed by oil and mining interests. Deforestation does not provide lasting social benefits to the peasants. As land yields decline, they move to deforest another plot of land. While oil extraction contributes 65% of Ecuador's Amazonian GDP, its contribution to employment is extremely low at 0.9%. In contrast, agriculture accounts for only 4% of GDP but provides

[g] Interview with Dr. Mario Melo, lawyer expert in indigenous rights, Quito, August 22, 2020.

54% of employment[31,32]. The Amazon region remains the poorest in the country, with oil revenues mostly benefitting urban highlands, including Quito. In the Ecuadorian Amazon, the detrimental effects of environmental degradation, pollution, loss of biodiversity, and social conflicts overcome the potential local benefits brought about by employment and local investment of oil revenues. As a result, living conditions in oil extracting areas are worse than those in the rest of the Amazon.

Peru Oil exploitation in the Peruvian Amazon began during the governments of Velasco (1968-1975) and Morales (1975-1980). Extractivist economic models were promoted under García (1985–90), who signed an exploitation agreement with Shell, Fujimori (1990-2000), and Toledo (2001-2006), who modified forest legislation to grant a large number of timber concessions. During his second term (2006-2011), President García initiated a confrontation with Indigenous peoples and peasant farmers through a series of newspaper editorials which expressed contempt for those sectors of society, a sentiment largely shared by a significant portion of non-Indigenous society in urban centers.

In response, Indigenous peoples demanded access to justice and respect for their rights. Some have been successful; for example, in July 2020, after many years of campaigning, the Federation of the Achuar Nationality of Perú (FENAP) and the Autonomous Territorial Government of the Wampis Nation (GTANW), succeeded in reverting a concession to the oil company GeoPark, which had been operating on their land without an environmental or social licence. At the same time, Indigenous peoples face great risks; at a protest of the PetroTal installations in Loreto on August 8, 2016, three members of the Kukama community were killed and several people were seriously wounded on both sides.

Venezuela The Amazon bioregion covers 49.5% of Venezuela. It houses 12 natural protected areas and 29 Indigenous nations, including three groups in voluntary isolation or initial contact. It also contains significant mining resources like gold, diamonds, bauxite, iron, and coltan. The territory has been home to significant mining operations and hydropower installations for decades. Despite the 1999 Constitution's protection of environmental and Indigenous rights, the Chavez government emphasized extractivist development policies in Amazonia, and launched the "Orinoco Mining Arc" (OMA). "The Big Crisis" (2013-2020) was a national collapse that led to the disintegration of a nation and economy built around the oil industry. The process of dissolution of the petro-state involved the resolution of conflict by force, and an extraordinary boom in corruption and underground economies. This accelerated natural resource extraction and destruction.

The described factors led to the emergence of a new governance structure that created a landscape of predatory extractivism. In 2016, President Maduro established a "special economic zone" for foreign investment in the OMA, a scheme promoted principally by China, and one that cut labor and environmental regulations. The area soon came under the control of armed actors, including criminal gangs ("mining syndicates"), Colombian armed groups, and official security squads, mostly belonging to the military. Violence was and continues to be the primary resource for operation and control. The government responded by increasing military presence in the region and in the management of the companies. However, the continuing prevalence of illicit economies resulted in various hybrid governance structures that blur the boundaries between legal and illegal operations and exhibit no concern for conservation.

Bolivia Bolivia has the second highest rate of primary-forest cover loss in the Amazon after Brazil, despite having one of the lowest human population densities in South America. The largest share of deforestation occurs in the lowland region, predominantly around the city of Santa Cruz de la Sierra and the Santa Cruz Department, the main agricultural center of the country.

Santa Cruz underwent an intense colonization process from the 1950s through the 1990s, accompanied by accelerating deforestation due to the influx of agro-industrial corporations, farmers, and foreign producers who cleared large areas for agriculture. This process was facilitated by government policy and World Bank financing aimed at promoting economic growth. During the 2000s, the main drivers of deforestation were conversion of forest to pasture, mechanized agriculture (mostly soybeans), and to a lesser extent small-scale agriculture. Increased demand for soybeans and beef became the major underlying cause of deforestation.

In parallel to this process, Bolivia was a pioneer on many environmental issues, such as the creation of protected areas, the implementation of advanced forest management regulations, and the creation of Indigenous territories. In the early 2000s, during the Morales administration, a new paradigm, "Living Well", was encoded in the country's Constitution (2009). Bolivia became a pioneer on environmental legislation, passing the Law of the Rights of Mother Earth (2010), and the Framework Law of Mother Earth and Integral Development for Living Well (2012), establishing the rights of Indigenous, rural, and Afro communities[33]. Yet, despite this innovative legal framework, little progress was made in avoiding deforestation. Illegal timber production increased dramatically in the last 15 years, and deforestation rates have reached all-time highs. Despite Constitutional requirements that Indigenous peoples have free, prior, and informed consent to allow resource extraction in their territories, a 2015 Decree allows the government to decide the timing and procedure for consultation, rendering the process ineffective.

Conclusions Since the 1970s, and particularly during the early 21st century, the Amazon experienced the largest expansion of human intervention in its history. Commodities extracted from the Amazon on a large scale include soy, beef, iron ore (Brazil), oil and gas (Colombia, Ecuador, Peru), gold (Peru, Venezuela), and illegal drugs (Colombia, Peru, Bolivia). Moreover, large infrastructure projects, such as roads and hydroelectric dams, became indirect drivers of deforestation and forest degradation. The neo-extractivist developmental model did not generate significant improvements in the living conditions of the local population, including countless Indigenous communities, and Amazonian territories remain at a disadvantage relative to other regions.

Excepting Venezuela, agriculture and cattle ranching seem to be the most important deforestation drivers, although countries differ in terms of the importance of small versus large scale producers. Brazil and Bolivia lead the region with the highest rates of primary-forest cover loss; a second group with moderate impacts includes Colombia, Peru, and Ecuador. Relatively low tree cover loss characterizes Venezuela, Suriname, Guyana, and French Guyana. In all cases the neo-extractivist model has been stronger than conservation policies, although an important portion of Amazon land is protected or covered by recognized Indigenous territories (approximately 50%) and other protected areas (Chapter 16). The only national policy with substantial effects in curving deforestation was the Brazilian experience between 2005 and 2012, with an 84% reduction in deforestation rates (Chapter 17). Although the outcome is currently reversed, the model could be successful again in the future.

References

1. Costa, C. Amazon under threat: Fires, loggers and now virus. *BBC* (2020).
2. Corte Suprema de Justicia - República de Colombia. Sentencia STC4360-2018. https://www.cortesuprema.gov.co/corte/wp-content/uploads/2018/04/STC4360-2018-2018-00319-011.pdf (2018).
3. Van Dexter, K. & Visseren-Hamakers, I. Forests in the time of peace. *J. Land Use Sci.* 15, 327–342 (2020).
4. Betancur-Alarcón, L. & Krause, T. Reaching for the Mountains at the End of a Rebelocracy: Changes in Land and Water Access in Colombia's Highlands During the Post-peace Agreement Phase. *Front. Environ. Sci.* 8, (2020).
5. Rodríguez-Garavito, C., Rodríguez, D. F. & Durán, H. C. *La paz ambiental: retos y propuestas para el posacuerdo*. *Centro de Estudios de Derecho, Justicia y Sociedad, Dejusticia* vol. 124 (2017).
6. Murillo-Sandoval, P. J., Van Dexter, K., Van Den Hoek, J., Wrathall, D. & Kennedy, R. The end of gunpoint conservation: forest disturbance after the Colombian peace agreement. *Environ. Res. Lett.* 15, 034033 (2020).

7. Prem, M., Saavedra, S. & Vargas, J. F. End-of-conflict deforestation: Evidence from Colombia's peace agreement. *World Dev.* 129, 104852 (2020).
8. Richani, N. The agrarian rentier political economy: land concentration and food insecurity in Colombia. *Lat. Am. Res. Rev.* 51–78 (2012).
9. Dávalos, L. M., Sanchez, K. M. & Armenteras, D. Deforestation and Coca Cultivation Rooted in Twentieth-Century Development Projects. *Bioscience* 66, 974–982 (2016).
10. Mendoza, J. P. Colombia's transition to peace is enhancing coca-driven deforestation. *Environ. Res. Lett.* 15, 104071 (2020).
11. UNODC. *World Drug Report 2020*. (2020).
12. Dávalos, L. M. *et al.* Forests and Drugs: Coca-Driven Deforestation in Tropical Biodiversity Hotspots. *Environ. Sci. Technol.* 45, 1219–1227 (2011).
13. Sadinsky, S. & Iriarte, R. C. Broken Promises in Colombia's Coca Fields. *Open Society Foundations* (2019).
14. Liga contra el Silencio. Planes de hidroeléctricas en Caquetá , la amenaza silenciosa a la Amazonía colombiana. 1–15 (2019).
15. Global Forest Watch. Forest Monitoring, Land Use & Deforestation Trends Global Forest Watch. https://www.globalforestwatch.org (2020).
16. Finer, M. & Mamani, N. Deforestation in the Colombian Amazon – 2020. MAAP #120. https://maaproject.org/2020/colombian_amaz/ (2020).
17. Global Witness. *Defending tomorrow: The climate crisis and threats against land and environmental defenders. URL: https://www. globalwitness. org/en/campaigns/environmental-activists/defending-tomorrow* (2020).
18. Peters, S. *Rentengesellschaften*. vol. 34 (Nomos Verlagsgesellschaft mbH & Co. KG, 2019).
19. Oxfam. Oxfam International. The power of people against poverty. (2016).
20. Lessmann, R. *Proceso de paz, guerra contra las drogas, sostenibilidad y alternativas*. (CAPAZ Documento de Trabajo. Bogotá. En prensa., 2021).
21. Bass, M. S. *et al.* Global conservation significance of Ecuador's Yasuní National Park. *PLoS One* 5, e8767 (2010).
22. RAISG. *Deforestación en la Amazonía. 1970-2013*. (RAISG Red Amazónica de Información Socioambiental Georreferenciada, 2015).
23. Ayala, E. M. *et al.* Ecuador Today. (2018).
24. Herbert, B. Disaster in the Amazon. *The New York Times* (2010).
25. Amazon Defense Coalition. Summary of Overwhelming Evidence Against Chevron in Ecuador Trial. 6–9 (2012).
26. Becerra, S., Maurice, L. & Desprats-Bologna, S. Nuestro vivir en la Amazonia ecuatoriana: entre la finca y el petroleo= Vivre en Amazonie équatorienne: entre pétrole et terres agricoles. (2018).
27. Larrea, C. M. *et al. Oil Extraction and Local Social Development in Ecuadorian Amazon*. (Universidad Andina Simón Bolívar UASB, 2019).
28. Larrea, C., Larrea, A. I. & Bravo, A. L. Petróleo, sustentabilidad y desarrollo en la Amazonía norte del Ecuador: dilemas para una transición hacia una sociedad post- petrolera. *Construyendo puentes entre Ecuador y Colomb.* 145–173 (2009).
29. Larrea Maldonado, C., Arroyo, L. M. & others. *¿Está agotado el periodo petrolero en Ecuador?. Alternativas hacia una sociedad más sustentable y equitativa: un estudio multicriterio*. (Universidad Andina Simón Bolívar, Sede Ecuador, 2017).
30. Sierra, R. Le Deforestación en el Ecuador. Tendencia a largo plazo y factores recientes. (2020).
31. INEC. Encuesta ESPAC 2019, digital database. (2019).
32. BCE. Banco Central del Ecuador Cuentas Nacionales Regionales. (2018).
33. Romero-Muñoz, A., Fernández-Llamazares, Á., Moraes R., M., Larrea-Alcázar, D. M. & Wordley, C. F. R. A pivotal year for Bolivian conservation policy. *Nat. Ecol. Evol.* 3, 866–869 (2019).
34. Castro, S., Barrera, J., Carrillo, M., Giraldo, B. & Grupo Sistemas de producción Sostenible. *Elementos y criterios de uso y aprovechamiento de PNMB. Contexto e importancia de los PNMB en la Amazonia.* (2017).
35. Guariguata, M. R., Cronkleton, P., Duchelle, A. E. & Zuidema, P. A. Revisiting the 'cornerstone of Amazonian conservation': a socioecological assessment of Brazil nut exploitation. *Biodivers. Conserv.* 26, 2007–2027 (2017).