11

The International System, Global Crises, and Deforestation

In 2019, I was visiting Bogor near the capital Jakarta in Indonesia to present this book project at the Center for International Forestry Research (CIFOR). When I landed in Jakarta, I was struck by the endless expanse of buildings. It was truly a hulking modern metropolis, which had displaced the beauty that could still be found on other Indonesian islands. In addition to being ugly and polluted, the city was sinking, which caused the government to move the capital to Kalimantan, in the middle of Borneo Island. Thus building a new city from scratch in the middle of palm oil plantations that were actively deforesting the unique rainforests. These were sites where commerce had thrived for thousands of years, vessels from China passing Singapore, whose financial districts, refineries, and companies were now pushing for expanding the plantations on top of forests, in an unequal ecological exchange. Without this unequal exchange, the fancy city hotels and neighborhoods could not be built. This experience sparked my interest to read more about world-system expansion and its links to deforestation globally, beyond the Amazon and Finnish contexts I had already studied in detail. I concluded that also here – in the form of oil palm and pulp – there were regionally dominant political economic systems ravaging forests and tightening their grip on power.

The Negative Impact of Wars and Other Epochal Events on Forests

For centuries, the interstate system has been based largely on rivalry. Accumulation of economic capital and development via economic growth has been seen as necessary to secure national supremacy, security, survival, and competitiveness. Evans (1995) explores how states have been able to fund security measures by embedding the key industrial sectors that provide global leadership, markets, and technological advancement. The rivalry-based interstate system has sacrificed forests over and over for the sake of power struggles and the so-called development of cities, infrastructure, and agriculture. This dynamic is especially apparent during

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 01:41:35, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009389556.016

what I call epochal moments, which are moments when deforestation activities have peaked. A key characteristic of these epochal moments is the widespread perception that a global crisis is present, which has opened a momentary possibility to accumulate much more than would be possible in times of peace. Wars are an especially impactful type of epochal moment due to the havoc they wreak on forests.

When the Spanish Armada was built so much wood was required that the Iberian Peninsula became depleted of its magnificent oak forests. Yet, what was there to show for the destruction of these forests after the war? Most of these wooden vessels were lost when the fleet was decimated by England in 1588, as were most other ships that were sent to colonial and inter-European wars. In the eighteenth century, an oak vessel lasted on average 12 years, yet needed about 4,000 thick oak trees to be built, which translates to approximately 40 hectares of forest. As the decimation of forests was essentially led by the European navies some scholars have characterized the wars fought by these navies, not only as wars against other colonial powers, but also as wars against trees across the globe (Thorne, 2022). At the time, European powers such as England and France also started major campaigns to plant oak and other trees commonly used in shipbuilding. Increasingly, issues around access to timber became a major problem for countries' continued world conquest, including timber depletion, taxes and levees on timber resources, and fights over the key commodity routes for importing timber (Braudel, 1992).

Wars also deforest by increasing the demand for wood, directly at battle sites as forests were purposefully eradicated for combat reasons (a well-known modern example of this is what the United States did in Vietnam with the widespread use of the herbicide Agent Orange) (Crouse, 2015), or to provide fuel (as the Germans did in Lapland during WWII, cutting and burning natural forests on fells to combat the cold. To date, these areas have not returned to forest, but are still tundra).

In fact, a strong military presence in a country's politics has been linked to increased deforestation (Chakravarty et al., 2012), which was visible in Brazil during its military dictatorship (1964–1984) when the deforestation frontiers were advanced over vast areas by infrastructural projects for ill-conceived geopolitical and developmentalist reasoning (e.g. to "secure" the Amazon from would-be invaders, by conquering and deforesting it themselves). The same kind of increased deforestation took place with the Bolsonaro regime, which was composed of even more military officials than the dictatorship governments. Many civil wars have also led militaries to deforest, to sell timber or open mines to fund warmaking; for example, in Myanmar and other parts of Southeast and South Asia (Chakravarty et al., 2012). During wars, commodity prices typically jump, which leads many to engage in quickly logging vast areas to reap the windfall gains. After the war is over, wood is needed for construction, which again increases logging.

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 01:41:35, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009389556.016

Wars also create impediments for international trade. For example, the historic moments of Finnish forest degradation are linked to the epochal moments of major wars, including the "tar boom" during the American Civil War in the 1860s and the Korean War in the 1950s. During these two booms, logging was quickly expanded to try and capture profit from the increased prices of tar and logs in global markets. However, this led to an overall depletion of wood. This boosted the massive state support for tree plantation expansion, trenching, mechanization, and the clearcutting that was already ongoing. This system quickly took root in Finland during WWII as clearcutting was forced on many areas because wood was needed to provide fuel since oil was not available in Finland. Currently, the closure of the Finnish border with Russia due to the latter's invasion of Ukraine has caused a major increase in clearcutting in Finland, as wood no longer flows across the border from Russia. Furthermore, as money is spent on warmaking, forests are cut to provide revenue. While the deforesting impacts caused by war are huge, so are the impacts of other epochal moments.

Another longer-term epochal moment is the broader setting of what I understand to be a new commodity paradigm, where, since 2005, the prices and production costs of most commodities have risen considerably and market volatility has increased. This is pertinent because some of the commodities, including timber, beef, and gold – all of which have seen record highs since 2019 – have a direct effect on deforestation activities. Unfortunately, this correlation has not been noted by most market or natural resource analysts. By building on the world-ecology argument about the end of so-called cheap commodities or "natures" (see Moore, 2015), one can see in practice how and why the prices for so many commodities continue to rise, even while volatility increases. This combination leads to more complex, chaotic, and difficult-to-organize supply chains and value webs. The theorists who are making more general claims (too broadly and vaguely in my estimation) have called this the end or demise of the capitalist world system (see e.g. Wallerstein et al., 2013), global capitalism, or a more general collapse of complex, industrial societies. I have offered a detailed, empirically grounded take on these broad schemes. This provides the bridge to my argument on the crucial role of RDPEs in world-ecology.

Geopolitics plays a key role in affecting what happens to forests, as geopolitics takes place within the capitalist world-ecology and world system (Moore, 2017). An expansion of the tar boom example mentioned is a good illustration of the impact of geopolitics on forests. During the American Civil War, access to the crucial tar of North America was seriously curbed, which led to a dramatic spike in demand and price paid for the tar made from deforesting Finnish pine forests (Toivanen & Kröger, 2018). This expansion of the tar frontier into Northeastern Finnish forests had tremendous socioenvironmental impacts. These forests had been perpetually

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 01:41:35, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009389556.016

retained and maintained through a system of rotating swidden commons which allowed most forests to recover naturally, yet still produced food surplus. This system also functioned as a basis for the nonprivate property-based social system with forest commons. However, the war and the world powers needed tar, especially for tarring the ropes and planks of the British Imperial fleet. Thus, tar capitalists living in Finnish coastal ports and European cities such as Amsterdam and London saw great opportunities to take advantage of the peak prices by producing as much as possible as fast as possible. This led to great investments to open rivers and build other infrastructure that otherwise would not have been constructed. Once the epochal moment had installed the infrastructure, trade networks, debt obligations, interpersonal relations between important traders, and the other initial political economic characteristics needed for an extractive system, entire forests were burned in kilns for their tar, leaving a barren and void land, with most people who had lived in such areas turned landless and forestless. This in turn caused huge numbers of people to die during the "hunger years" of the 1860s (Toivanen & Kröger, 2018). After the epochal moment, the established infrastructure, sunk costs, and the relations and obligations between key players ensured that forests continued to be turned into tar. After the tar boom subsided, the same infrastructure and logic of using forests for their tree mass were followed by other types of forestry extractivisms.

Another epochal moment for Finnish and other forests around the world was the Korean War in the 1950s. This led to a dramatic increase in the price of lumber and other wood products. Finnish forestry decision-makers decided to try to maximize profits during the very few years they knew that the war would last, for example by rapidly deforesting remaining old-growth forests in Southern Finland. These imperatives were a rational management of national wealth, the accumulation of capital from and within the international system, and the rebuilding the Finnish nation after WWII. That war had been the midwife for birthing the modern model of clearcutting. A military logic was adopted toward forests – clearcutting huge areas to get wood for running the wood-gas generated (carbon monoxide)-based cars using a domestic raw material. By using wood-based energy, the Finns were able to lessen their dependency on foreign oil, gas, and coal. This logic of ensuring national security amid the existential threats due to the war with the Soviet Union replaced the prior notions of how to relate to a forest, where clearcutting and deforestation were interpreted as raping the forests and clearcut areas were called raped forests. After WWII, new forest practices were quickly imposed that made it impossible to do anything other than clearcutting; this is a policy that continued into the 2010s and still marks the situation, where over 97 percent of all loggings are clearcuts, although forestry studies indicate that at most 25 percent of loggings should follow that logic (Juntti & Ruohonen, 2023).

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 01:41:35, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009389556.016

The perception of a global crisis, in epochal moments, opens a momentary possibility for industries to start to accumulate much more at the cost of forests than would be possible without these critical junctures. Even after the crisis is over, the fate of an area is practically already sealed once the infrastructure that supports deforestation has been established. It is all the interconnections and interests that make sure the forests are clearcut even after the epochal moment. However, these epochal moments are just the tip of the iceberg of the underlying characteristics of the interstate system that drives deforestation.

Interstate Rivalry and a World-System History of Deforestation

National security has become the key pursuit of most modern states, surpassing environmental and even economic aims. The pursuit of this development path by nations in the international system has meant the continued devaluation of forests and forest peoples. While especially realists have emphasized the rivalry omnipresent in the international system, some realists such as Hedley Bull (2012) highlight that there is also an "international society" aspect to this rivalry, where states and other actors can and do meet to make (some) positive decisions. Under this realism, the role of international society is emphasized, especially the role of the so-called great powers, whose existence and relations provide order for the international system, according to Bull (2012). This order is comprised of the rules, norms, expectations, and decision-making procedures that create international regimes (Krasner, 1983).

There is an urgency for this international society, especially the G20 countries – due to their key role – to create norms that do not cause humanity to surpass biosystem limits, which could cause biocapacity to collapse globally. Forests are an essential element in this normative goal. The role of the international society regarding conservation has been studied, especially by some branches of international relations. The literature on global environmental governance (GEG) has studied the role of the international system in governing aspects of the environmental regime, for example, the ozone layer. When the Montreal Protocol was established in 1987 to counter ozone layer depletion (which ultimately succeeded), scientific research was unclear and unfinished on the importance of the ozone layer and the causes of its depletion (Morin & Oberthür, 2013). Based on this and other cases – where well-established scientific facts do not lead to better policy outcomes – GEG has found that policies do not naturally flow from scientific knowledge, as politics and knowledge are different, often inimical, fields, and sometimes further scientific literacy even increases conflict (Morin & Oberthür, 2013). This seems to be especially true in relation to deforestation and climate change – as there are many potential solutions that are known but not yet executed. Certification

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 01:41:35, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009389556.016

schemes have been in the limelight of forest-based studies in international relations, such as those from the FSC (Cashore et al., 2004), and other private politics, like informal corporate rules around logging (Dauvergne, 2004).

The GEG literature lacks a further analysis on the role of and resistance to economic and political powerhouses, such as corporations and economic sectors. This focus is needed to complement the existing GEG studies on global actors and institutions purporting to be for environmental protection (Newell, 2008). The RDPE theory addresses this issue as it addresses the interests that these actors become either a part of or a victim to, which helps to explain how bad global governance can continue despite scientific truths. Governments choose to do these things due to the invisible interest groups that manage to persuade them. This also happens due to the competition between states, especially between ecological imperialist, rival cores with competing imperial interests (see Frame, 2022).

Based on my findings thus far – although I concur with Hedley Bull (2012) that the interstate system composed of rivalling states is not in decline even today – I challenge the potential optimism of Bull in that "international society" can so easily find solutions to key issues such as deforestation and the climate crisis. This is because of the interpenetrating nature of capital and capitalism, whereby so many states, and the corporations owned or headquartered under their sovereignty via their pension and mutual funds, stand to lose in the short term though increasing regulations and barriers to trade. A clear example of this is the resistance that has been raised to the attempt by the EU to design an anti-deforestation law by restricting imports from high-deforestation risk regions. Key players in the resistance include both European farmers (wanting cheap commodities, especially feed) and those in exporting countries (such as Brazil and Malaysia) (Bounds et al., 2024). The EU Deforestation Regulation was passed into law in 2023. It became effective in late 2024, divides countries into three categories based on risk, and places 3, 6, or 9 percent of their exports to the EU in the six commodity categories that are under scrutiny. These measures are intended to compel the producers to show by certification and geographic positioning system (GPS) locations that they are deforestation-free. Even these measures have been heavily criticized by countries like Malaysia and Brazil. The interpenetration of capital suggests that the international society of great powers is less likely to be able to reach an agreement on curbing deforestation than solutions implemented at the regional or national level that are based on active local and national resistance. International regulators can play a role, but they do so under the delimitations of the RDPEs that compose the world as we know it. These global dynamics are rooted in the regionally dominant extractive sectors, which are the building blocks of global markets and production.

The hypothesis that the current structure and rules of the international system drive deforestation gains weight with a look at the most recent major deforestation

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 01:41:35, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009389556.016

drives happening in the world. While palm oil and acacia plantations ravaged enormous areas of the Indonesian and Malaysian rainforests in the 1990s and 2000s, world powers did little to deter these events (Humphreys, 2006). Instead, companies like the Finnish Neste made new investments, which were widely supported by both the sending and receiving cities and governments, for example in Singapore and Rotterdam investments were made in biorefineries that made biofuels from palm oil and other commodities (Sherrard, 2019). Another example of this is when the American-based Cargill grain-trading corporation built a soybean export harbor in Brazil's Santarém city, at the confluence of the Amazon and Tapajós Rivers in the mid-2000s: No real action was taken by governments to block the port operations (Kröger, 2024). This port greatly accelerated deforestation in the surrounding Amazon forests to make room for soybean plantations.

In both cases, there were private negotiations between leading international environmental organizations and multinational corporations utilizing the commodities, to avert buying soybean or palm oil from deforested areas through voluntary moratorium deals (Cashore et al., 2006; Dauvergne & Lister, 2011; Garrett et al., 2019; Schleifer, 2023). However, while these measures did slow expansion to some extent, they also resulted in moving a considerable part of the Amazon soybean frontier to the Cerrado forest, which has had catastrophic impacts on the hydrology, climate, and soils. Thus, even though the frontier was moved, the overall impetus remained. Forests were still razed for the seemingly superior goal of producing commodities for the growing global economy and, importantly, for the needs of so-called rising global powers, especially China. This is to be expected, as it is common that modern global powers, during their ascension, typically rely on excessive and destructive extraction of raw materials (Kröger, 2020a).

This kind of extraction that happens on multiple frontiers and at multiple levels is referred to as global extractivism. Extractivism is the taking of resources without care or consideration for giving back, that is, without reciprocal and sustainable relations. Instead, the focus is on maximizing the yields from extraction at a very fast pace considering only short-term needs and goals (Chagnon et al., 2022; Ye et al., 2020). This causes major devastation ecologically, socially, politically, economically, and especially in terms of existences, which are wiped out en masse, leading to ecocides and even genocidal projects of expansion (Kröger, 2022). These extractivisms have been particularly harmful for forests, which have been used wantonly during the past centuries, and even earlier, during longer-term empire building. Wood products, in the form of lumber, mast wood, blanks, paper and pulp, tar, potash, and charcoal, among others, have been essential building materials for erecting new empires throughout centuries and even millennia (Perlin, 2005). The free flow of these commodities has been an imperative for the international system. Its key players, both the older and rising powers, have

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 01:41:35, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009389556.016

wanted to retain these dynamics, to ascertain the possibilities for them to remain at the top or for their power to continue to grow, depending on their current situation. The depletion of these resources, or the ignorance of the environmental conditions on top of which all societies are built, has meant that within the 5,000 years of world-system history, the collapse of civilizations has happened repeatedly, according to Chew (2007). The key impetus for these collapses has been the power driven by what Ekholm and Friedman (1982) called "capital" imperialisms, running from Sumerians 5,000 years ago to today (Ekholm & Friedman, 1982). Frank and Gills (1994) theorize these expansionist dynamics of the world system are an impetus at the root of the system, which goes beyond the Westphalian order or the 550 years of the capitalist world system. Chew (2007) calls these collapses "recurring Dark Ages," where deforestation ensued due to prior growth of the world system. This deforestation dynamic causes many other problems, such as erosion, floods, extinctions, and climatic havoc. However, now these changes are more rapid and dangerous than in previous periods due to being closer to global climate tipping points.

RDPE Sectors in the World System

In addition, RDPEs are reinforced by the ongoing actions of extractivist corporations, in much the same manner as prior deforesting RDPEs during the past 5,000 years. Perlin (2005) describes how aside from the obvious need for wood for the ship building of maritime empires, processes like urbanization need wood for construction, fuel for firing pottery in kilns, and food preparation. In fact, the Romans required so much wood specifically for smelting the silver in the Iberian Peninsula that the demise of the woods there required decreasing the silver content of their currency (Perlin, 2005). For Chew (2007), these Dark Ages, of which a new one is unfolding right now, also offer possibilities for transformations at the systemic and social levels, which could in theory lead to improved relations with nature and more sustainable technologies. The collapse of "civilizations" is not a negative thing for the victims of their ongoing violence, to those whom the system in power is killing at the moment (Dunlap, 2024) and who are waiting for the collapse of the current order (Scott, 2017). This is also possible in the present-day situation, as the future is still open.

This interstate rivalry can be seen as taking place within the global capitalist system and within several regional varieties of capitalism. There is the overarching global system, but then within that there are also different economic sectors, which sometimes have competing interests and claims over the forest. The key cleavage is between the sectors which are and are not premised on the exploitation of wood. However, in practice the sectors that seek to retain wooded lands has meant, in many parts of the world, turning primary forests or seminatural forests into ordered

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 01:41:35, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009389556.016

lines of cloned, single-species, fertilized, and agrotoxic-filled tree plantations (Kröger, 2014). These monocultural tree plantations of hundreds of thousands of hectares are heavily managed using machines and pesticides, which leaves little to no possibility for species or populations – other than the selected wood-industry tree – to thrive in these areas. For example, in the Brazilian Atlantic Rainforest and the Southeast Asian tropical forests, the native forests have been decimated and replaced with eucalyptus plantations. In Finland and Chile native forests have been systematically turned into spruce and pine plantations, respectively, while in Indonesia, acacia dominates the landscape beyond its natural range mostly for the purpose of making pulpwood.

In contrast to the forestry sector, globally there are other, even more impactful, sectors that direct what happens to forests and can explain why it happens. While often valuable old trees are cut and used prior to the establishment of plantations, ranches, mines, or dams, this is typically a one-time, often illegal windfall gain for some specific, usually relatively small-scale actors. However, there are key businesses that make profits from the establishment of plantations and the ensuing rise in land property value. Thus, forests are not allowed to regrow. The qualitative change in forest cover is even more pronounced, since trees are often considered to be beings that can easily be erased for the plantation, dam, mine, or other capital expanders. In just a few decades, tens of millions of hectares of forests have been turned into soybean, corn, and sugarcane plantations in Brazil, while similar trends are visible in northern Argentina, Paraguay, and Bolivia, which since 2000 have seen huge areas of their forests annihilated and turned into crop monocultures (McKay et al., 2021).

What is curious about these agroextractivist deforestations is that they have often taken place under the umbrella of some sort of justifying and legitimizing framing and discourse, which has tried to posit these changes as solutions to the global ecological and climate crises, rather than being one of its key components. Concepts such as climate-smart agriculture, bioeconomy, and green economy have been introduced to try to change the productivist image of ethanol- and biodiesel-producing tree and crop monocultures. These concepts paint these sectors as beneficial because they function as a replacement for hydrocarbons and other fossil fuel-based industries, while obfuscating their role as agents of deforestation and emissions (Kröger, 2016). New techniques and technologies have allowed for some improvements to be made to the carbon emissions caused by these operations, but the overall impacts have been and continue to be replacing natural forests with plantations.

Importantly, these transformations continue to take place despite better options being available. For example, Brazil has approximately 160 million hectares of underutilized pastures (with an average of one animal per hectare), of which at least 100 million hectares could be turned into plantations (Carlos et al., 2022).

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 01:41:35, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009389556.016

Yet, the reason they have not been utilized as the main frontier to expand new plantations reveals a key aspect of the interface of the international system and RDPEs. The real world is not the place that Ricardian economists imagine, with entities vying for the rule of competitive advantage. It is also not set up in way that those who believe in an invisible hand would have it. In practice what should be most reasonably produced in one place is often not produced there. Instead, path dependency and technological lock-ins (Clapp, 2021), as well as other political dynamics of historical contexts, have a large role in determining what is and is not produced in a particular location. Brazil's 160 million hectares of cattle pastures are mostly idle because they are owned by established elite landholders, who usually do not have a pressing need to sell their lands. Yet, they can secure tenure with the help of hired guns and their in-built leverage in the Brazilian political and legal system to assert their de facto rights over those lands, even though many have questioned the de jure rights to these lands by their current de facto holders (Dowbor, 2018). Many of these lands have been grabbed illegally by falsifying deeds, which is allowed as pro-poor agrarian reform and land rights are not politically supported (Carter, 2015). In this context, those who seek to expand the soybean plantation enclaves find it easier to target forest areas that are already inhabited by traditional and Indigenous populations. The motivation for targeting these lands is twofold, they can avoid intercapital competition and they often already have close ties with the ranching landholders. Thus, we have seen the expansion of the soybean/corn/cotton frontier from Brazil's south first to the center-west Cerrado forests and then continuing north and northeast from there to the Amazon, and again even further into the Cerrado. More recently this frontier has expanded to the states of Maranhão, Tocantins, Piauí, and Bahia, which are collectively called MATOPIBA, which uses the first two letters of each state (Hershaw & Sauer, 2023). Brazilian governments, whether leftist or right-wing, have supported these moves, framing these agroextractivist, corporate-led expansions as key aspects of the national development plan.

The imperatives and explanations for these moves, in terms of the post-2000s plantation expansion, stem from the Global South's and especially Latin America's historically built role within the international system as a key provider of plantation-based commodities for rising global powers. Over centuries, political economic groups have been built and consolidated, whose ways of relating with forests not only allows, but deepens this deforesting tendency, which is in essence international.

International Consensus Allowing the Flow of Commodities

For the current international system, forests do not seem to truly matter even in the face of today's ever-more clear global ecological crises and the deep threats they

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 01:41:35, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009389556.016

pose for human and other existences. This argument is supported by a look at how the international system responded to the rise of Jair Bolsonaro as Brazil's president and the rapid rise of deforestations in places like the Amazon and Pantanal caused by his policies. China said practically nothing, nor has it taken responsibility for its actual role as the buyer of ever-larger shares of commodities produced through deforestation, such as Amazonian beef, minerals, timber, pulp, soybeans, and corn. The role of China has increased since the 2019 mega fires, which were set by Bolsonaro supporters. This is because some Western multinational companies have made pledges to no longer buy products that are produced at the expense of the Amazon, for example Brazilian leather. This move has led the large ranchers to instead sell all their cattle to China, a move which was apparent in late 2019 during my interviews with ranchers along the Transamazônica and BR-163 highways in Brazil. The leaders of some countries, such as France, have vocally condemned and protested against Bolsonaro's policies. Yet, these states have failed to place strong barriers or take notable immediate actions that would matter to the players on the ground and could potentially change the course of deforestation. The deforestation in 2019 was followed by many years of dangerously high Amazon and Pantanal deforestation rates from 2020 to 2022, as the deforestation regime stayed in power – nationally and internationally. Even during the first four months of 2024, although Lula was in power, there was the highest number of fires in the Brazilian Amazon in two decades, as the budget for fighting the fire starters was cut and environmental officers were not given enough compensation for their hard work. This resulted in a long strike that offered criminals an almost unchecked opportunity to expand fires and deforestation in the Amazon (Spring, 2024).

Despite calls for placing import bans on key deforesting commodities from Brazil, European and other governments have taken the stance that one cannot sacrifice good trade relations and flow of raw materials, even if this means increasing deforestation in the Amazon and other places. This became clear to me in 2019 during my public television talk with the Finnish foreign minister, who, although being from the Green Party and 2019 being a disastrous year for fires in the Amazon, argued with me after the public talk that one cannot anger other countries' leaders and that one needs to be extremely careful about not having other countries' blocking one's exports due to import bans. In addition, state representatives of the Ministry of Foreign Affairs and the Confederation of Finnish Industries gave highly favorable expert statements to the Finnish parliament regarding the Association Agreement between the EU and Mercosul that was under discussion for ratification by EU national parliaments. Ministry experts and lobbyists argued in fall 2020 in the hearing of the Committee of Foreign Affairs of the Parliament of Finland, where I had also been summoned to give an expert statement (Kröger, 2020d), that trade needs to be increased, and that the EU–Mercosul trade deal,

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 01:41:35, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009389556.016

which would ease and augment exports of raw materials from South America to the EU (Kehoe et al., 2020), would not be problematic. Instead, the industry representative emphasized the importance of the EU supposedly needing to use its "first-mover" possibility by making that trade deal with Mercosul, to gain a benefit in the global competition for resources vis-à-vis North American and Asian powers (a claim not supported by studies on the supposed benefits of such a move). Forests were not present in any meaningful way in these international relations considerations. Nevertheless, other changes in world affairs, such as increased worries related to the climate crisis, led to drafting a new EU policy to curb the import of commodities from deforestation areas. Additionally, the EU–Mercosul deal was frozen given the problematic pro-dictatorship actions of Bolsonaro, but also due to other complex world affairs. Lula aimed to reopen these negotiations and get better terms for Brazil, which the experts I interviewed have consistently said influenced the collapse of the whole agreement, as Lula miscalculated that they could still bargain with the EU. Lula would have liked the deal to be more beneficial for Mercosul's industrialization, which is something that the dominant agribusiness lobby does not support, given it would have to then give away some of the lucrative EU markets in exchange. Later Lula said that even the new EU proposition, which included some Amazon deforestation safeguards, would be okay. While many thought this meant the end of the deal, on December 6, 2024 the deal was surprisingly approved by the EU and Mercosul, after secretive negotiations. However, the deal still needs to be approved by national parliaments, many of which oppose the deal in Europe. Not passing the agreement would be good news for reducing deforestation and expansion of extractivisms.

It is interesting to see, in comparison to the issue of forests, how the Russian war against Ukraine was an event that merited the imposition of trade barriers and other means to pressure the government of Russia. However, even there, the flows of the most important commodities – oil, gas, fertilizers, and minerals – have mostly remained in place. This holds true even with those commodities going to many EU countries, although there have been some decreases in production. Another regime that merited this type of large-scale divestment campaign was the Apartheid regime of South Africa in the 1990s. These same kinds of moves have not been seen to a similar extent in relation to deforestation or ecocide. In the international system, forests are something which can be sacrificed if security, building of nation-state power, or capital accumulation are at stake.

Theorizing Deforesting World-Ecologies

There is a strong ontological take on forests in so-called Western civilization history which fails to see forests as places important to sustain. This is perhaps because

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 01:41:35, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009389556.016

trees do regrow; however, to reach the ecosystem complexity of old-growth forest is something that does not happen within a human lifetime. I have discussed in detail the role of specific extractivist sectors, highlighting how they are locally deforesting, but globally connected. I will now provide a brief historical analysis of the key features of the world-ecology which sustains deforestations.

The central world-systemic argument of the book, based on what has been and is happening to forests, is that the key characteristic of the current international system is rivalry between nation-states and powerful non- or partially statist actors such as corporations, which are partially linked to certain nation-states. The imperatives of these international dynamics have meant that struggles for international hegemony, dominance, security, and maintaining sovereignty have reigned over other kinds of considerations, such as saving forests.

Deforestation is happening due to the low valuing of forests in the world system – illustrated by this chapter – as forests are considered as material sources for building states, empires, and capital. For example, prior research on Brazilian elites and developmental policies has emphasized that these need to be understood within the Global South semiperipheral positioning of Brazil, where the role of the state has been one of intermediating and opening space for capitalist advances by foreign and national elite capital (Evans, 1979). Therefore, those who have been the regional or sectorial elites – in this case situated mostly within agribusiness – have depended on the world-systemic linking of Brazil and the given region during the period in question. As Nugent (2002: 63) elucidates in his study of Amazonian elites, these elites need to be understood as "episodically shaped by the role of the state in the world system." This can be said to also apply in the Peruvian and Finnish contexts. One cannot distinguish these processes from the expansion of modern states and thus the interstate system, which has been largely capitalist since the fifteenth century. This expansion has happened on top of forest areas and has simultaneously offered these forests as a commodity-producing playground for the elites, who themselves are made elite precisely by these resource and commodity frontier expansions.

In Peru, the deforesting mining system, with its elites, has its roots in the 1537 opening of silver, mercury, and other colonial mines, which served to feed the Spanish and European-led world system at the time. Mining capitalists and linked politicians still define the bulk of Peru's natural resource and other politics, but they do this within the world-systemic positioning of Peru – both this longstanding positioning and the particularities of the mining elites – which serves to explain the ill-fated policy decisions that have led in the past decades to rampant gold mining in Madre de Dios province in the Amazon. In this sense, Moore (2019) argues that it is wrong policy decisions rather than some kind of evil agency by elites that should be seen a key explanation of Peru's deforestation. The roads the

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 01:41:35, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009389556.016

state built in the 1960s and 1970s to Madre de Dios were also a decision to bring in Andean colonizers, who razed valuable forests, ranched for a while, and then abandoned the area. This colonization policy, alongside the decision to feed the loan-based international commodity market by building the Interoceanic Highway (it should be noted that this decision was made in 1983 but was carried out by Brazil's Odebrecht-led consortium in 2005–2011) explains the world-systemic linking of these Amazon forests (Moore, 2019). In Finland, the international demand for wood products, especially paper and pulp in the twentieth century, led to the dominant hegemony of the paper and pulp industry, whose leaders are key political economic elites in terms of having the power to define forest usage. In Brazil, the post-2000 spike in demand from China, and other rapidly growing and established economies, for commodities, especially soybean, corn, beef, pulp, metals, and minerals, is the episodic context that explains – at the broader level – why the Brazilian state has brokered in elites for these sectors, enabling and driving their dominance over regional territories. These vary depending on the region and sector, but there is sectoral unity and a large degree of national-level power for the new soybean elites and the older ranching and land-grabbing elites. In this sense, the elites at the helm of RDPEs are shaped by their interstate positionings and the current system's drives for a developmentalist agenda, quartile profits, security, and competitive advantages.

Summary

I have argued in this chapter that due to a several thousand-year process of rivalry and building of capital for empires to get or grow power, forests have been depleted, converted, and removed in alignment with the expansion of the world system. This process has expanded in both pace and scale during the past 550 years of capitalist world-ecology. The commodity frontier expansions have been truly dramatic for forests especially since the post-WWII expansion of global extractivisms and the consolidation of RDPEs based on or causing deforestation. What I call epochal moments have been especially detrimental in this larger-scale and world-systemic view on global deforestation because during these ruptures deforestation peaks for several reasons. The epochal moments of war in particular have led to major damage to forests, because during and after war the logic, fear, and rage of rival nation heads has turned from the battlefields to the forests. In addition, pandemics, financial crises, and other unexpected market crisis events in the world system have led to increased deforesting commodity demand and prices and deforestation through multiple channels. We are treading a very dangerous path if the interstate system based on rivalry continues to reign supreme, wherein the key goals of states are to secure supposed national security, development, and warmaking capacity

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 01:41:35, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009389556.016

without due caution and care for the planetary limits and climatic-ecological tipping points – in which natural forest play a key role. The global, systemic problem persists, but there are natural and planetary limits to how long this interstate rivalry can continue if we want to maintain the possibilities of life on Earth.

One way to begin to counter the problem, as I have explained in other chapters of this book, is to focus attention on the RDPEs as the root, sectorial, and systemic causes of deforestation. The solutions to curbing their power need to include the local and national levels and regional politics, including resistance and good solution suggestions, through which policies are made. Besides this, forests should gain a more protected status and level of importance in the interstate system. The implementation of new rules to curb the trade of deforestation-originating goods is a good first step in this direction. There would be so many more opportunities to craft new kinds of governance tools and understandings and norms wherein retaining forests is taken seriously in the international, regional, interstate systems. However, this means that the political and lobbying power and reach of deforesting sectors and corporations must be curtailed on all scales, from local to national to international. Unless that political economic power is tackled head on, it is difficult to envision how effective plans for global deforestation countering can be crafted, as politically that becomes practically impossible, due to the compound effects of different regionally powerful extractivists lobbying together for multilateral and plurilateral state institutions to allow them to continue their business as usual. In this case, business as usual means that everyone should have the so-called freedom to buy, sell, and consume whatever commodities or goods that are produced wherever on the planet and by whatever means necessary. To counter this tendency, the flow of commodities in the international system should be regulated and curbed. This would also mean that the international system does not finance new infrastructure and extractive projects to tap into new raw material sources. The curbing of finance, support, and deforesting commodity trade would also start to erode the position and power given to current RDPEs and their key actors. That would be a world-systemic-level challenging of the root causes; that is, structures perpetuating deforestation at the international level. However, that alone would not be sufficient across the board as I have discussed in previous chapters, as there are many local and regional causes of deforestation that need to be dealt with by other means.

Downloaded from https://www.cambridge.org/core. UNIVERSIDAD AUTONOMA METROPOLITANA, on 19 Nov 2026 at 01:41:35, subject to the Cambridge Core terms of use, available at https://www.cambridge.org/core/terms. https://doi.org/10.1017/9781009389556.016